Opportunities and Challenges for Local Food Procurement by Mining Companies in Tanzania and Mozambique

Kathryn Sturman ¹ Ola Bello ²
¹ Centre for Social Responsibility in Mining ² Head of Governance of Africa's Resources Programme
¹ Sustainable Minerals Institute, University of Queensland ² South African Institute of International Affairs

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Research aims:

This research activity investigated how local food procurement by mining companies can make a sustainable contribution to local development and poverty reduction. The two case studies were:

- Mbalawala coal mine in Ruvuma Province, Tanzania
- Benga coal mine in Tete Province, Mozambique

For further information on this action research: Contact person: Kathryn Sturman k.sturman@uq.edu.au

IM4DC Action Research Report





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Summary of Action Research Activity

Opportunities and challenges for local food procurement by mining companies in Tanzania and Mozambique

This report investigated the opportunities and challenges for local food procurement by mining companies in Mozambique and Tanzania. The aim of the research was to identify factors that create a 'win-win' local food procurement policy for mining companies and local farmers in two case studies. An analytical framework for the project was derived from definitions of 'local' in the literature, to distinguish between three levels of local procurement:

(1) From the immediate vicinity of the mine ('local' local)

- (2) From the region or province (subnational)
- (3) From within the country's borders (national)

Despite the similarities of the two coal mines in neighbouring countries, the case studies revealed how different the opportunities and challenges for local food procurement are in each specific context.

Three contextual factors relating to the location of the mines were identified as relevant:

- Accessibility of the mine to air and road transportation
- Proximity of the mine to a large urban centre
- Proximity of the mine to other mines in the region

Factors identified that were within the control of mining companies were:

- Including local procurement and employment conditions in contracts with catering services and close monitoring of subcontractors in this regard
- Implementing a local employment and skills development policy, as local workers seemed more amenable to eating local food than ex-pat workers
- Menu-planning around seasonal produce that is locally available
- Decentralising decision-making on food purchases to a local chef or caterer who speaks the local language and has good networks in the community

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IM4DC Action Research Project Report October 2014



Centre for Social Responsibility in Mining Sustainable Minerals Institute The University of Queensland, Australia csrm@smi.uq.edu.au www.csrm.uq.edu.au

Authors

Dr Kathryn Sturman, Senior Research Fellow, Centre for Social Responsibility in Mining

Dr Ola Bello, Head of Governance of Africa's Resources Programme, South African Institute of International Affairs (SAIIA)

Reviewer

Dr Joanne Everingham, Senior Research Fellow, Centre for Social Responsibility in Mining

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The Centre for Social Responsibility in Mining (CSRM) is a leading research centre, committed to improving the social performance of the resources industry globally.

We are part of the Sustainable Minerals Institute (SMI) at the University of Queensland, one of Australia's premier universities. SMI has a long track record of working to understand and apply the principles of sustainable development within the global resources industry.

At CSRM, our focus is on the social, economic and political challenges that occur when change is brought about by resource extraction and development. We work with companies, communities and governments in mining regions all over the world to improve social performance and deliver better outcomes for companies and communities. Since 2001, we have contributed to industry change through our research, teaching and consulting.

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Executive summary

This report investigates the opportunities and challenges for local food procurement by mining companies in Mozambique and Tanzania. It presents the findings of an action research project funded by the International Mining for Development Centre (IM4DC). The aim of the research is to identify factors that create a 'win-win' local food procurement policy for mining companies and local farmers in two case studies. The cases are Mbalawala coal mine operated by Tancoal in Ruvuma Province, Tanzania and Benga coal mine, operated until October 2014 by Rio Tinto Coal Mozambique in Tete Province.

A literature and policy review found that there is increasing emphasis placed on local content requirements in policy for the extractive industries in Africa, but there are few empirical studies of how mining companies implement local food procurement in practise. Useful observations were drawn from existing sources on local procurement in Africa, which informed the case studies. In particular, an analytical framework for the project was derived from definitions of 'local' in the literature, to distinguish between three levels of local procurement: (1) from the immediate vicinity of the mine ('local' local); (2) from the region or province (subnational); and (3) from within the country's borders (national). The different developmental benefits derived from food procurement at these three levels underscore the utility of the framework.

Key findings of the research are:

- The Mbalawala case in Tanzania shows that there is a good business case for 'local' local food procurement in a remote location, as well as a clear benefit to local communities. A medium-sized extractive enterprise in this case has greater flexibility and smaller orders for food than a larger operation, which matches well with the capacity of local suppliers. The market for food created by the mine is small, however, with few opportunities for linkages to wider regional development.
- The Benga case in Mozambique shows that regional food procurement by fresh food distributors and catering companies on behalf of mining companies is a feasible model for developing commercial agriculture on the regional level, provided that mining companies encourage and exercise oversight of such practises by their contractors. Disruptions to food security and livelihoods of local communities by the mine-induced resettlement process in Tete makes 'local' local food procurement a less feasible prospect, at least in the next 3-5 years.

Despite the similarities of the two coal mines in neighbouring countries, the case studies reveal how different the opportunities and challenges for local food procurement are in each specific context. Three contextual factors relating to the location of the mines were identified as relevant:

- Accessibility of the mine to air and road transportation;
- Proximity of the mine to a large urban centre;
- Proximity of the mine to other mines in the region.

The cost, quality and reliability of food supply were important to supply chain management decisions. The competitiveness of local suppliers and catering services in these respects was a consideration for both companies. The inaccessibility and isolation of the Mbalawala site relative to the Benga site meant that the local goods and services were more competitive with external suppliers due to higher transport costs and the smaller market of a single mine (versus the mining-intensive region of Tete).

While contextual factors should not be underestimated, factors within the control of mining companies could be identified:

- Including local procurement and employment conditions in contracts with catering services and close monitoring of subcontractors in this regard;
- Implementing a local employment and skills development policy, as local workers seemed more amenable to eating local food than ex-pat workers;
- Menu-planning around seasonal produce that is locally available;
- Decentralising decision-making on food purchases to a local chef or caterer who speaks the local language and has good networks in the community.

Local content policy being drafted in both countries should be nuanced enough to address the potential for local food procurement by mining companies in different locations and at different scales, as indicated by this research.

Introduction

Food is considered one of the most easily sourced inputs to a mining project. It is classified in supply chain management theory as 'non-critical' rather than 'strategic' (Kraljic, 1983). It is one of 'the trivial many' needs, rather than 'the important few' (MacBeth, 2002) that are essential to production (such as technical equipment or fuel). Yet the positive impact a wellexecuted local food procurement policy can have on community development and community relations for a mining project is not trivial at all (Esteves & Barclay, 2011: p.209).

For this reason, food and catering are usually near the top of the list of goods and services in local procurement policy. The capacity of locals to supply or service mining companies is often better in this sector than others (such as manufactured goods), particularly in remote, rural areas. Why, then, would imported food still appear on the canteen menu?

The aim of this project is to investigate the opportunities and challenges for local food procurement by mining companies in two case studies. The cases are in Southern Africa, where a common practise is for mining companies to import food from large external suppliers, for example, by road and air from South Africa. The case studies focus on local food procurement by mining companies in Ruvuma Province, Tanzania and Tete Province, Mozambique. This has wider relevance for other mining companies operating in developing, largely agricultural economies. Like many developing countries, Tanzania and Mozambique depend on their agricultural sectors for food security and employment.

The research question is:

What factors create a win-win local food procurement policy for mining companies and local farmers and food suppliers?

Policy and literature review

At the policy level, the benefits of local procurement are recognised in global and African governance frameworks for the mining industry. According to the World Bank Report (2012), *Increasing Local Procurement by the Mining Industry in West Africa*, there is a "compelling economic argument that local procurement by mining companies can bring about significant benefits to a wide range of stakeholders" (p.vii). Mining companies reduce their costs by procuring locally as they minimise logistics and stock holdings, at the same time enhancing their reputation and community relations. Local farmers and entrepreneurs gain employment, business skills and opportunities. Opportunities arising from mining can encourage local communities to move beyond subsistence farming. Benefits of the resource project stay in the region and spread into more labour intensive sectors.

The regulatory frameworks of Tanzania and Mozambique have been refined in recent years with respect to local procurement in the extractive industries. In Tanzania, the Mineral Policy of 2009 requires mining companies to procure local goods and services to "promote Tanzanians to supply quality goods and services to the mining industry" (Art.5(2)). Mining license applicants are required to submit a procurement plan for local goods and services (Arts. 29(3)(e), 49.2(h), 41(4)(g). The Local Content Policy for the Oil and Gas Sector, adopted in 2014, is expected to be followed by similar policy for the mining sector. In Mozambique, the Corporate Social Responsibility Policy for the Extractives Sector, adopted in 2014, lists "employment creation, development of human capital and development of local companies" as "CSR priorities" for extractive industries (Chapter 2, translated from Portuguese). The government of Mozambique has not yet regulated a specific local content policy for the extractive industries, but had begun drafting a local content policy for discussion at the time of writing.

The African Mining Vision (2009) Framework for Action sets objectives for local procurement and upstream linkages between mining companies and local businesses. Agriculture is promoted as the sector with the greatest potential to boost human development in Africa by the New Partnership for Africa's Development (2001).

In contrast to the numerous policy declarations about local procurement, the academic literature on how these policies fare in practise in Africa is quite limited. As noted by Morris, Kaplinsky and Kaplan (2012), the problem for developing a policy agenda is the "knowledge gap on the extent and determinants of linkages in most low and middle income economies, which is most acute in SubSaharan Africa" (p. 405).

The special issue of *Resources Policy* 37 (2012) edited by Morris et al addresses this gap with several papers on local procurement in the mining sector in Africa. The most relevant to this project is Hanlin and Hanlin (2012), "The view from below: 'lock-in' and local procurement in the African gold mining sector". Case studies are presented of three gold mines in Tanzania and one in the Democratic Republic of Congo. Key conclusions are that "firm-specific strategies have an important bearing on the outcome" (p. 469) and that "the attitudes and actions of individual supply chain managers" play a significant role (p. 473). They also point out that the existing literature "appears predominantly based on what happens in European, North American and Asian environments where procurement officers are not subject to the same... unfamiliar business environments" (p. 471). The importance of local knowledge and time to build relationships of trust are factors in the success of local procurement practises. Hanlin and Hanlin's work validates the comparative approach to the site-level strategies of two different companies in two African countries and the focus on decision-making processes involving key individuals in each case.

There is scant information specifically about food procurement by mining companies in Southern and East Africa. A useful parallel exists, however, in a study of "Tourism food supply linkages in Zambia" (Rogerson, 2011), which compares the extent of local food procurement by a sample of 28 safari lodges operating in Zambia. What these lodges have in common with mining projects is that they are usually situated in remote areas, where local communities live in poverty and there are no or few other sources of employment (Rogerson, 2011: p. 26). The survey of Zambian safari lodges found that communication and trust between local food producers and food sourcing decision-makers facilitated local food procurement (p. 32). Being able to speak the local language enabled chefs or managers to find out what was available, negotiate prices and inform local farmers of their needs. Conversely, where the menu was decided by expatriate management (mostly from South Africa or the UK) these respondents expressed a lack of trust in the reliability of local suppliers and wanted to avoid "the hassle factor" of engaging locally (p.32).

Communication with potential local suppliers is also emphasised in Michael Warner's practically focused book on *Local Content in Procurement: Creating Local Jobs and Competitive Domestic Industries in Supply Chains* (2011, pp. 144-146). Warner's recommendations for a procurement communications plan for sourcing from local SMEs and capacity building of SMEs are relevant to the two case studies.

The review of existing policy and research in this area confirms the value of this action research project. It is hoped that the two case studies and comparative analysis will make a contribution to knowledge of the opportunities and challenges for local food procurement by mining companies in developing countries and suggest avenues for further research.

Methodology

Qualitative approach

A desktop literature review, including the secondary sources discussed above, was used to inform the approach taken in the research project and to prepare interview questions. A qualitative methodology was adopted in part due to the time and budget constraints on field work and the difficulties of collecting data on local food procurement from more than two mine sites in remote locations. The focus on two case studies was practically feasible while allowing for comparison and analysis of each case in reasonable depth. Data on the type, quantity and source of food purchased in both cases was collected for descriptive purposes. However, the focus was on understanding and explaining the opportunities and challenges for local food procurement, rather than on quantifying the precise extent of local procurement in each case.

Case study selection and fieldwork

The two cases for this project are Tancoal's Mbalawala mine in Ruvuma Province of Tanzania, and Rio Tinto's Benga mine in Tete Province of Mozambique¹. These cases were selected on the basis of their comparability in terms of both similarities and differences. What they have in common is that both are:

- Coal mines (albeit mostly coking coal in Mozambique and thermal coal in Tanzania);
- Foreign investments by mining companies listed on the Australian Stock Exchange (ASX);
- Located in neighbouring African countries, in which coal mining is a relatively new industry;
- Located in remote regions far from the capital cities of Dar es Salaam and Maputo;
- Impacting on local communities who rely primarily on subsistence agriculture and experience high levels of poverty.

The relevant differences between the two case studies are:

- Size of mining project;
- Size of mining company (a junior mining company vs. a major MNE)
- Proximity of the mine site to a large urban settlement;
- Accessibility of the mine site by road and air (e.g. frequency and capacity of flights; distance from airports; tarred vs. dirt roads);
- Capacity of local suppliers of food and catering services.

Other similarities and differences between the two case studies are presented in more detail in the analysis. The case study in Tanzania was chosen to profile a local community development project by a relatively isolated mine operating on a small scale, which enables local women to grow and process food to supply the mine and other local markets. In contrast, the case study in Mozambique is of a mining project situated within a booming coal region, where the cumulative impacts and opportunities brought by mining have a larger footprint.

Fieldwork was undertaken in May 2014 by Kathryn Sturman in Tanzania and Ola Bello in Mozambique. Semi-structured interviews were conducted to determine each company's policy and process of local food procurement, as well as other relevant contextual factors,

¹ Rio Tinto announced the sale of Benga mine in July 2014, after the fieldwork for the case study was conducted in May. The analysis was updated following the announcement, with further input from Rio Tinto. Since the case study reflects on 'lessons learned' regarding opportunities and challenges for local food procurement in Tete province, the change of ownership does not have a significant bearing on the findings. The case study offers a timely resource for the future operators of Benga mine, as well as other stakeholders in the region.

such as resettlement of local communities and wider community investment programs of each company. A total of 25 individual interviews and 2 group interviews were held with mining company staff, consultants, suppliers and community members. These are listed at the end of the report.



Local market at Ntunduwaro village, Tanzania

Analytical framework: three levels of 'local'

Local procurement is defined in a number of ways in industry policies and government regulations, with differences over what constitutes 'local' (Esteves et al, 2013; Warner, 2011; World Bank Report, 2012). Some define local according to the ownership of a business supplier, while others consider where the business is registered or headquartered. The widest definition of local business is any business that has a branch or subsidiary within the host country, such as if a multinational mining services company opens an office in the country.

The most useful definition pertaining to food procurement is based on where the food is grown and processed. This corresponds with the 'near-sourcing' principle to buy food grown within a certain geographical radius, which has been popularised by consumer activist groups. Buying food locally and in season is an environmental sustainability issue, which should inform corporate responsibility policies irrespective of other considerations, such as supply chain linkages.

The project therefore adopts an analytical framework to distinguish between three levels of local food procurement, according to proximity to the mine site. These are:

- 1. 'Local' local: food grown or processed within the district where the mine is located, or by local communities impacted by the mine.
- 2. Regional: food grown or processed within the largest subnational administrative region, namely the provincial level in Tanzania and Mozambique.
- 3. National: food grown or processed within the borders of the host country, that is, not imported food.

A similar geo-spatial rubric is applied to catering services, namely those owned and staffed predominantly (1) by 'local' locals; (2) by people from the region; or (3) by nationals of the host country. It is important to distinguish between these three levels of 'local' because of the different developmental benefits of food procurement at each level. Procurement from any company within the borders of a country will have macro-economic benefits for GDP growth. However, as local farmers in Tete pointed out during field interviews, the direct benefits of procurement at this level may be flowing to politically connected, wealthy elites in the capital city (which in Mozambique is two hours' flight from Tete). Procurement within the province will have a regional development effect. 'Local' local procurement could have the additional benefit of mitigating negative impacts of the mine, such as livelihood restoration for resettled communities.

Case study 1: Mbalawala coal mine, Ruvuma province, Tanzania



Tancoal's stockpile

Background to the region

Mining has been the fastest growing sector in Tanzania since the start of the global commodities price boom, with an average annual growth rate of around 15% since 2000 (Lokina & Leiman, 2000: 1). The country is now Africa's third largest gold producer and natural gas discoveries have attracted significant foreign investment in recent years. Coal deposits of a recorded 1.5 billion tonnes are currently mined on a small-scale (Tanzania Ministry of Energy and Minerals website). However, linkages to power generation projects make these investments important to Tanzania's development.

Ruvuma province is in southwestern Tanzania and is bordered by Mozambique in the south and Lake Nyasa in the west. The province consists of three rural districts and the urban township of Songea. Mbinga district, in which Ngaka coal field and Mbalawala mine are located, is the smallest of the rural districts by land area (11,396km²), with a population of around 400,000. The region is mainly agrarian, with over 87% of people residing in rural areas and engaged in agriculture (Tanzania Government, 1997: 25). Small-scale gold mining in Mbinga district has been reported (Tanzania Government, 1997: 25), although not in the vicinity of the Mbalawala operations. The depletion of woodland for firewood, timber and charcoal is a significant problem in the region (Tanzania Government 1997: 6).

Maize is the major food source and cash crop in the region. Other crops cultivated in this district include coffee, wheat, sunflowers, cassava, cashew nuts, Irish and sweet potatoes. Livestock include cattle, goats, poultry, pigs and sheep. Fishing is an important source of livelihoods and protein in Mbinga District, predominantly on Lake Nyasa, but also from rivers including the Ruvuma River (Tanzania Government, 1997: 62).

According to a socio-economic study of Ruvuma province conducted in 1997, there were few cattle in the zone between Songea and Mbinga district due to tsetse fly infection (Tanzania Government, 1997: 22). However, a more recent government programme supporting cattle farming in the Mbinga district was mentioned in the interviews, which accounted for the beef available from local co-operatives in Ruanda village in May 2014.

Coffee is a major cash crop for the Mbinga district, and is currently a more significant contributor to jobs and the GDP of the region than mining. A coffee curing factory is owned by the Mbinga Marketing Co-operative Union (MBICU), which produces the Mbinga instant coffee mentioned in the report.



Locally grown Mbinga Coffee served on-site

Local indigenous conservation farming method "Ngoro"

The Wamatengo ethnic group make up over 60% of the population of Mbinga district, and are traditionally subsistence cultivators, practising a cultivation method known as "Ngoro" to grow beans and maize. The Ngoro method was developed over 200 years ago and has been recognised as "an indigenous and ingenious manual cultivation practice for steep slopes", which conserves soil, nutrients and water effectively (Malley et al, 2004: 47). Malley et al (2004) recognised the system as 'profitable', which implies that there is significant potential for local villagers to farm a surplus of maize and beans for market in this district. The poor road infrastructure in the region is identified as a factor inhibiting growth of commercial agriculture in the region (Tanzania Government, 1997: 40).

Challenges for agri-business development in the Ruvuma province have been identified by the Tanzania government as:

- 1. Poor infrastructure, such as roads, storage facilities, power and water;
- 2. Lack of market for some products;
- 3. Low entrepreneurship;
- 4. Lack of credit facilities.

Transport infrastructure is quite limited in the region. At the time of writing, there were four flights a week from Dar es Salaam to Songea, in 12-seater light aircraft making roughly a two hour journey. From Songea, the Ngaka mine is accessible by road, the first 100km on the sealed national road, then 40km on unsealed road, passing through the village of Ruanda.

A coal-fired power station proposed to be built by Tancoal at Ngaka would clearly address the energy infrastructure challenge. The extent to which formal mining will serve as a catalyst for entrepreneurship, grow the market for local produce and even attract formal banking and credit facilities to the region is considered in this case study.



Figure 1: Map of Ngaka coalfield, Tanzania

Source: IEC operations report, 2011

Mbalawala mining project

The Mbalawala thermal coalmine development is located at the Ngaka coalfield in southwestern Tanzania. Intra Energy Corporation Limited (IEC) operates the project by its investment in Tancoal Energy Limited (Tancoal), (IEC 70%, National Development Corporation (NDC) 30%, an investment company of the Tanzanian Government).

Intra Energy Corporation Limited (formerly known as Atomic Resources Limited until 2011) is an Australian-based mining and energy company with thermal coal assets in Tanzania and Malawi, as well as assets in Asia and Australia. IEC is the only operating thermal coal miner

in Eastern Africa, and the Tancoal mine in the Ngaka Coalfield is its flagship project. The company began trading on the ASX in 2007. Tancoal received the mining licence for South Ngaka in 2011 and commenced mining at Mbalawala in the same year (Intra Energy website).

The mine currently employs approximately 150 workers, of whom around 40% are local to the area. Operations run 24 hours a day in three shifts, with one meal provided per shift to 66 workers and 12 trainees (at the time of writing).

Social impacts of mine on local communities

There are two villages near to the Mbalawala mine, Ntunduwaro and Ruanda. Ruanda is the larger of the two, and has a hospital established in 1980 that serves a population of around 8,000. The most apparent impact of the mine on this village is the dust raised by the trucks transporting coal from Mbalawala mine along the unsealed road, which covers houses and gardens adjacent to the road for several hundred metres. Village elders interviewed mentioned dust as their primary concern and feared for the safety of children and animals from traffic accidents. Tancoal regularly sprays the road with water, particularly in the dry season, to control dust and instructs drivers to slow down in and around the village. The company is considering building an alternative private road to reach the tarred national highway, as a longer term solution to the health and safety impacts on this village.

The second village of Ntunduwaro is within the mining concession, and parts had to be resettled a short distance (less than 5km) in 2011. Tancoal compensated over a hundred households and provided piped water up a hill to these households. The provision of water was regarded as a positive impact of the mine on this community, as women and girls were previously walking long distances to fetch water. Tancoal's CSR program included renovations to the Ntunduwaro primary school, which has around 500 learners. The local market in the village has expanded since the mine began employing local workers and there were more opportunities to transport goods for sale from Songea and Mbinga.

The area remains sparsely populated, although there has been some migration to the two villages since 2011. Accurate recent census figures could not be obtained, but both village councils said numbers had increased since the mining project commenced.

Procurement of food and catering services

Tancoal purchases food and catering services from the Mbalawala Women's Organisation (MWO). The MWO supplies food and caters for 80 meals per shift for the Ngaka site operated 24 hours a day by Tancoal.

The mine's management were initially approached by a larger foreign catering company with supply contracts for a number of mines in Southern and East Africa, but they chose to

work with the local women's organisation instead. This decision was based on previous positive experiences the IEC has had with local food procurement in Indonesia. The motivation for focusing the procurement and CSR activities on a women's group was also because local village women were not benefitting as much from employment at the mine as local men. Although the company policy is to encourage women to train to operate machinery and do other jobs at the mine, only one woman from the local community had so far enrolled as a trainee.



Mrs Leah Kayombo, General Manager, MWO

After initial consultation with the Mbinga District Council, an existing women's group, led by Mrs Leah Kayombo, was put in contact with Tancoal. The women's group was registered as an NGO under the name Mbalawala Women's Organisation (MWO) in August 2012. The patron of the organisation is Mrs Asha Bilal, wife of the Vice-President of Tanzania. The Executive Committee meets quarterly and is comprised of six members:

- General Manager of MWO
- 1 Tancoal (IEC the parent company)
- 1 NDC (30% JV partner in Tancoal)
- 1 District Council
- 1 Chairman Ruanda village
- 1 Chairman Mtundwaro village

The MWO was assisted by a \$28,500 grant from the Australian Government Direct Aid Program in 2012 to establish a plot of land, water tanks and irrigation system to grow vegetables. They were also assisted by Tancoal to renovate and furnish an office in a building owned by the District Council, situated along the road between Ruanda and the Mbalawala mine.



MWO office located on road between Ruanda and Ntunduwaro

The MWO currently employs 25 people on two to three-year contracts, including three managers: the GM, the financial manager and the operations manager. They also hire casual workers when needed, for example, during planting season. They have a full-time cashier responsible for bookkeeping. All but two (the driver and chef) are women. All but two (the financial manager and chef from Dar es Salaam) are locals. The 20 local women were not previously employed. MWO is assisting their employees to open bank accounts and is in discussion with a bank in Songea to establish a branch at the MWO office in Ruanda, as well as a money transfer facility. Salaries are above the minimum wage and employees receive contributions to the National Social Security Fund, although this was delayed in some cases where they did not have birth certificates to register for the Fund.

The MWO has three main activities: 1) camp services; 2) farming: vegetable garden, rice cultivation & tree nursery; and 3) charcoal briquette-making. They began pottery making initially, but have stopped producing pottery after a strategic review, where they decided to focus on the most commercially viable of their activities.

The camp services include housekeeping and catering, as well as growing fresh produce for the camp kitchens. There are two canteens at Ngaka, catered with different food for the 'seniors' and 'juniors', who have different menus. There is a third 'juniors' canteen at the coal stockpile. The seniors generally sleep on-site and the juniors live locally. The menu is decided collectively by the MWO, with most input from the chef who oversees cooking for all canteens. They sell the vegetables to the canteen at the market price paid in the local villages, even though Tancoal pays for the inputs, such as seeds. The MWO also buys eggs and chickens from the local villagers and this provides an opportunity for others besides those employed directly. The camp services made a surplus from sale of eggs and vegetables to the mine and local villages, and eggs and tea to the juniors, but overall the MWO is not yet 'breaking even'.

Two to three women work regularly at tending the vegetable garden, growing onions, okra, chinese cabbage, pumpkins, tomatoes and sweet potatoes. They decided to concentrate on a few varieties of vegetable, as these were the easiest to sell in the villages. The chef wanted more variety of fresh vegetables for the canteen, however, such as broccoli, carrots, leaks, lettuce, cauliflower and snowpeas.

The MWO chef shops for the juniors' canteen twice a month in Songea and weekly for the seniors' canteen. MWO would shop less frequently if they had more storage facilities. MWO owns a freezer at the stockpile canteen and they use Tancoal's freezer at Ruanda. MWO uses a number of suppliers in Songea for food. They are in the process of negotiating supplier contracts/ agreements for at least six months duration, to supply agreed quantities at a set price. They aim to have agreements with at least three suppliers of the same product, to ensure quality and choice. The housekeeping and catering services are paid out of Tancoal's operating account, while the rest of the MWO budget is from the CSR account.

The types and quantities of food sourced by the MWO from the two local villages and surrounding district of Mbinga are as follows in Table 1:

Food purchased or grown	Source	Comments		
юсану				
Rice	'Local' local: grown by MWO on	Provided four month's supply		
	3 acres	as a staple in 2013		
Maize meal	'Local' local: grown and ground	MWO checks the quality of		
	by local village women, bought	grinding, which is done		
	by MWO	manually; served as a staple at		
		every meal		
Eggs	'Local' local: bought from both	Does not supply as much as needed, eggs also bought in		
	villages by MWO			
		Songea		
Chicken	'Local' local: bought from both	Small quantities		
	villages by MWO			
Fish	Regional local: mostly Ruvuma	Smaller dried fish available in		
	river fish bought in Songea	Ntunduwaro market		

Table 1: Food sourced locally by MWO

Beef	'Local' local: bought from	Cattle introduced as a		
	youths' cooperatives, take	government programme in the		
	turns to use slaughterhouse in	district now used to supply beef		
	Ruanda	to the mine		
Coffee	Regional local: Mbinga coffee	Grown within the district and		
	farmers	processed as instant coffee at a		
		small business in Songea		
Milk	'Local' local: Ntunduwaro	Fresh milk from village used fo		
		tea for canteen		
Avocados	'Local' local: trees in both	Seasonal		
	villages and mine site			
Oranges	'Local' local: trees in both	Seasonal		
_	villages			
Bananas/ plantains	Regional local: village 15km	Most of the year		
	away			
	<i>(</i> , , , , , , , , , , , , , , , , , , ,			
Cassava	Local local: MWO vegetable	Small quantities of cassava		
	garden and Ntunduwaro	flour bought from Ntunduwaro		
		women's group		
Spinach, sweet potatoes,	'Local' local: MWO vegetable	Surplus sold to mission hospital		
onions, etc.	garden			
Chillies	'Local' local: both villages			

Opportunities



Mrs Joyce Haule, MWO Operations Manager

Charcoal briquette-making:

A spin-off from the MWO's food and catering services to Tancoal has been the development of a viable charcoal briquette-making small enterprise. Because the thermal coal burns at such a high temperature, it needs to be modified for household use. Tancoal donated a briquette-making machine and allows the MWO to use their laboratory to test the briquettes.

The process of making briquettes is simple and uses all local and cheap inputs: coal dust (collected at the mine), sunflower seed husks, soil (to reduce calorific value) and lime (to reduce carbon monoxide emission). MWO have applied to the Tanzanian Bureau of Standards to certify the briquette product. Sale of the product to local communities will have an environmental benefit if it supplements the current use of wood and wood charcoal for household cooking.



MWO tree nursery

Tree nursery: The MWO has established a tree nursery, with the intention of selling the saplings to Tancoal for land rehabilitation. Three to four local youths are employed on a casual basis to collect seedlings in the wet season and seeds in the dry season from the surrounding area. Their local knowledge of the trees and seedlings will be useful for the land rehabilitation process.

Small business in local villages:

Soap making: Usilale ("don't sleep") women's group of about 25 women has been making soap and selling it in Ruanda village for a number of years. The ingredients have to be purchased in (large town where international airport is, five hours drive north), which is the main challenge. There is a new market for their products in the MWO's cleaning services provided to the mine.

Cassava flour, cakes and chiapati bread: A women's "self-help" group in Ntunduwaro have a machine for grinding cassava flour (donated by the Tanzania government). They grow cassava and supply cassava flour to the village and small amounts to the Tancoal canteens. They need a scale and packaging materials if they want to sell it in 1kg bags commercially. They have been trained to make cakes and chiapati, which they could supply to Tancoal if they built or purchased an oven.

Challenges

Unreliability of local meat supplies:

The Ruanda butchery slaughters cattle twice a week on Wednesdays and Saturdays, with local groups taking turns to sell the meat. The quality of the beef varies, according to the MWO chef. Some groups are willing to sell to him on credit, while others demand cash.

Suppliers also do not always turn up on the day agreed. Most keep chickens as 'prestige' animals for their households, and are only willing to sell them occasionally when they need cash.

Sharing opportunities and benefits beyond the MWO:

Recently, women in both villages have asked MWO to hire a completely new staff contingent rather than renewing the existing staff contracts, because they felt "it is their turn" (interview with MWO management). MWO has tried to explain that they cannot have a complete turnover of staff and train new people every few years.

MWO makes it clear to others that although the organisation was only small at this stage, there is much room to grow and employ more people in the future, especially if the briquette-making takes off. They also publicise the opportunity open to everyone to sell fresh produce (such as eggs) to the MWO. They state that their policy and preference is to buy as much locally as possible, and only buy from Songea what the locals cannot supply. There is also potential for bee-keeping and more farming activities, especially animal husbandry, which has not been practised much in the area. Locals were asked whether Tsetse fly was prevalent in the region, and they said no and that it can be controlled, so should not be an obstacle.

An acre of land has been purchased for the local youth organisation, which is in the process of clearing it. They have planted maize so far and Tancoal will assist with the irrigation once the land is cleared.

In general, it was felt by all interviewees that the MWO had improved community relations for Tancoal with the two local villages. Some felt, however, that Tancoal could have considered a few other groups for the various projects, for example, the MWO has not made full use of the pottery and briquette-making machines. There may be others who could make better use of these opportunities if given the chance. Stakeholder engagement was not mapped as effectively as it could have been at the outset.

Need for strategic planning, business skills and confidence to diversify MWO business activities:

MWO is hoping to diversify their projects and to plan them more strategically rather than in an *ad hoc* manner. They have applied a business case template to their activities and plan to introduce simple performance indicators (KPIs) for each activity, in consultation with Tancoal's community relations manager.

Conclusion

This case shows that local food procurement can be achieved by a remotely located mining project of this scale, since local food suppliers do not face stiff competition from larger external food and catering companies. A medium-sized extractive enterprise in this case has greater flexibility and smaller orders for food than a larger operation, which matches well with the capacity of local suppliers.

Success factors for local food procurement include:

- A high level of local employment at the mine (approximately 40% from the local communities and less than 10 expat employees) means less demand for imported food from workers;
- Menu planning and food purchasing decisions made by the MWO in consultation with Tancoal management, with the MWO chef delegated to purchase food directly from local suppliers;
- Business skills mentoring by Tancoal's community relations manager and regular engagement with MWO;
- Leadership and entrepreneurship of local women managing the MWO (Mrs Leah Kayombo and Mrs Joyce Haule).

Case study 2: Benga coal mine, Tete province, Mozambique

Background to the region

Mozambique is a recovering, post-conflict state characterised by significant developmental challenges and low levels of human development according to major international benchmarks and measurements. As recently as 2009, the country was not considered a major natural resource producer. However, in the aftermath of successive discoveries of huge gas reserves along the coastal region as well as large coal deposits in its north-west province of Tete, Mozambique's developmental outlook and extractive export potential have been transformed.

Tete Province is situated in the north-western section of the Central Zone of Mozambique and is bordered by Malawi, Zimbabwe and Zambia and by Manica Province. Its northern districts of Tsangano and Angonia have traditionally been important grain producing areas. Maize, sorghum, beans and groundnuts are cultivated, while cassava is a minor crop. The use of animal traction is widespread in the province. A large portion of the province depends greatly on livestock raising because it has a low average rainfall. Tete Province has no tradition of growing cash crops. However, the cultivation of tobacco has been introduced along the border with Malawi (FAO Global information and early warning system on food and agriculture WFP Special Report Crop and Food Supply Assessment Mission to Mozambique 1997)

The Zambezi Coal Basin in Western Mozambique has been compared to Queensland's Bowen Basin in terms of size and economic significance. In Tete, major international mining companies including Vale, Rio Tinto and Jindal, among others have been developing coal mining. The Ministry of Mineral Resources announced in 2010 that eight coal mines were expected to be operating in the region by 2020. The anticipated scale and duration of these extractive projects in Tete province means that the potential development effects of a successful local food procurement strategy is considerable, particularly if integrated into multi-stakeholder regional development plans, such as the Beira Agricultural Development Corridor.

Transport infrastructure is relatively good and Benga mine is far more accessible by air and road than Ngaka mine in Tanzania. There are daily flights to Tete from Maputo and five flights a week from Johannesburg. Benga mine is located next to a sealed national road, immediately adjacent to the airport and within 10km of the city of Tete.



Figure 2: Map of Benga coal mine, Mozambique (source: RTCM)

Benga mining project

The Benga coal project, until late 2014 operated by Rio Tinto, is situated within the Lower Zambezi coal basin, at the junction of the Revubue and Zambezi rivers. A mining license for the project was granted to Australian company, Riversdale Mining Ltd in May 2009. RT's operations in Tete began with the acquisition in 2011 of 65% of the Benga mine as part of its purchase of a majority share in Riversdale. Tata Steel owns the remaining 35% share in the project. Benga coal mine was officially opened in April 2010. Commercial production of coal was reached in the third quarter of 2012. In October 2014, Rio Tinto Coal Mozambique (RTCM) sold its assets in the Benga coal mine and other projects in Tete province to International Coal Ventures Private Limited (ICVL).

In May 2014, RTCM directly employed about 330 people in total (273 Mozambicans, 57 foreigners). In addition, contractors to RT such as Equestra, which washes coal, employed an additional 500 people. In total, approximately 1000 workers (both core RT and contractors) were connected to RT's coal mining operations in Tete. Large numbers workers and

contactors (some housed in camps) needed feeding, in a context where the local food supply chain was poorly developed.

Social impacts of mine on local communities

The Benga mine, along with other mining and exploration projects in Tete province, has contributed to significant cumulative impacts in the region. Positive impacts include growth in employment directly and indirectly linked to mining, infrastructure development and growth of markets, such as for agricultural produce. Negative social impacts related to inmigration to Tete include traffic congestion and accidents, overcrowding and housing and food price inflation. Health impacts of sexually transmitted diseases and alcoholism are indirectly linked to the increase in money circulating in the local economy and in-migration.

The most direct impact of the Benga mine has been the resettlement of households from within the concession. Some 85 households were resettled between November 2010 and March 2012, and 354 households were resettled during 2013 to the rural area called Mualadzi, approximately 40km away. A further 35 households have been resettled in 2014 and there are plans to resettle a further 262 urban households. The social impacts of this resettlement process have been documented, for example, by Southern Africa Resources Watch (2012) and Human Rights Watch (2013) and are the topic of another IM4DC Action Research project in 2014 by Oxfam and CSRM.



Household plot on river bank near Benga mine

Procurement of food and catering services

RTCM (and previously Riversdale) has a contract with International Facilities Services (IFS), for catering the meals consumed at the operations in Tete. IFS Africa is headquartered in South Africa, and is one of the largest facilities management service providers to the mining industry in Africa (<u>www.ifsafrica.com</u>).

The contract with IFS stipulates that:

The Contractor shall... use supplier and manufacturers available locally or if not available locally then otherwise available within the Country, except... where the Contractor can demonstrate that such suppliers or manufacturers do not offer competitive prices or internationally comparable quantities, qualities and delivery schedules; and when hiring personnel, give preference to Mozambique citizens from the local or neighbouring communities or, if not available locally then otherwise from within the country, except ... where... the necessary skills and expertise are not locally available...

RT also applies its sustainability policies to the pre-selection process for these types of contract. One consideration of the pre-selection process is the extent to which the caterer demonstrates a sustainability awareness, which is defined to include preference for local food. In general, they are encouraged to source as much as possible locally. To encourage compliance, RT has procedures in place to continuously monitor the sustainability performance of its food providers through working closely with the sourcing manager on the caterer's side. RT's procurement management has noted a number of local products being sourced to feed workers at the mines through the catering arrangement.

The scale of RT's food procurement

In May 2014, RT provided breakfast, lunch and dinner to between 40 and 45 workers who were resident in camps. In addition to this, about 250 employees were provided with lunch on a continuous basis. A total number of 540 meals per day were catered for RTCM. Table 2 summarises data provided by RTCM on fresh food purchased for the Benga mine for January-June 2014 from Tete-based suppliers. The total monthly spend on fresh food from these suppliers is approximately US\$13,757.

Supplier	Food purchased for Benga mine	Quantity	Purchase value
		av./month	per month in US\$
Masvic Lda	vegetables (onions, peppers, carrots,	1,112kg	3,142
	potatoes, butternut, lettuce, other)		
Fruta e	vegetables (tomatoes, cabbage,	2,063kg	4,028
Vegetais da	cucumber, green beans, other)		
Terra Lda			
Fruta de Ouro	fruit (apples, bananas, oranges,	1,803kg	3,050
Lda	nectarines, other)		
Fazenda	vegetables (tomatoes, lettuce, green	40.5kg	77
Mizimu	paper, carrots)		
Warehouse	eggs	2,000 eggs	340
Tio Peixe Lda	chicken	865kg	3,120
Total			13,757

Table 2: Fresh food purchased locally for Benga mine, January-June 2014

Benga mine staff tasked with monitoring procurement collect data on different aspects of the food supply process. They reported that a significant amount of the food purchased still comes from non-local sources. At the start of RT's operations, the ratio of local to external food procurement stood at 1:9. At present, locally sourced food is said to have reached about 65% of the total. From the data provided in Table 2 above, one of the suppliers, Fazenda Mizimu, was identified as an entirely 'local' local supplier. The other companies, although all Tete-based, supply a range of regionally and nationally sourced fresh food.

Fazenda Mizimu: Although the purchase listed in Table 2 above from Fazenda Mizimu was only a fraction (1.25%) of total vegetable procurement at the time, this contract represents successful 'local' local food procurement from the resettlement area of Cateme, near Mualadzi. Mr Orlindo Valletta began farming at Cateme in 2010 and now grows vegetables, maize and sesame on 20 hectares of land, employing 15 workers. He supplies vegetables to IFS and Servco (Vale's catering contractor) through his company Fazenda Mizimu and Tetebased distributor, CB Farm Fresh. In 2013 he won an award from the Ministry of Agriculture as Mozambique's 'Farmer of the Year'. IFS signed a contract with Mr Orlindo in September 2013 to supply vegetables for catering at the Benga mine for RTCM. He is also one of the contractors working on the livelihood restoration projects for Mualadzi households. Mr Orlindo's business and the CB Farm Fresh supply chain offer a model for similar initiatives for local food procurement for mines in Tete province. In 2012, CB Farm Fresh established an 'Outgrowers Development Programme' to support local smallholder farmers in Tete province to build on this model (CB Farm Fresh website, 3/12/2014).

AgDevco: This DFID-funded initiative (also previously supported by the Dutch and Danish governments) invests in agricultural projects on commercial terms whilst undertaking social interventions such as the diffusion of farming technology and know-how throughout its

operational areas. With three and a half years of operational experience in Mozambique, it is one of the two main consultancies employed by RT at different times to help channel assistance to local farmers (the other being KPC). AgDevco has also been involved in some of the conversations between RT and the caterers that provide the bulk of food supplies that feed workers at the company's operations.

The AgDevco model aims to leverage contacts with local farmers to upscale rural agriculture capacity and link small farming units to potential large customers such as mining companies as a way of fostering sustainability and commercial viability in local farming. The company employs two principal approaches, namely investment through its fund managers in agricultural SMEs (for example clustering its investments in the Beira Agriculture Development Corridor) or injecting larger working capital into some facilities or projects.

SMEs are seen as developmental and hence given priority by the company due to their perceived multiplier effect. AgDevCo tries where possible to support small famers but this is done carefully given the known fragility of small business units particularly in the farming sector. The business has 16 active investments in the Beira Corridor many of which involve small farming projects directly, but also others, which are SMEs involved in agro- businesses or other areas. According to the AgDevco's managers, the aim is not to supplant or compete with commercial lenders to the agricultural sector. In practice, they've often tried to subordinate their own lending to the commercial sectors.

AgDevCo's engagement with RT began in the context of its catalytic fund. This was initiated in 2012 as a three way partnership between AgDEvCO, DFID and RT to look at three issues namely local sourcing, bio fuels and creating viable commercial agriculture opportunities in resettlement sites.

AgDevco has assisted in linking catering companies to local agriculture markets and farmers. RT's communication to local farmers through AgDevco has helped significantly in some areas. The consultancy has been educating local farmers on issues such as produce quality, hygiene and food handling, and with explicit reference to standards and specifications stipulated by potential produce buyers such as RT. This approach, based on close consultation among all the involved parties, has brought about some progress in terms of farmers gradually coming into compliance with specific produce standards. AgDevCo managers said that quality parameters were being met as a result of these efforts.

According to AgDevCo staff, a key challenge relates to the caterers contracted by RT not doing enough to grow local content in their food procurement. Invoices for AgDevCo's services were allegedly not being paid on time, and in one case, payment was allegedly delayed for about a year. Also, caterers contracted by RT have been alleged to delay payments to smallholder farmers, essentially squeezing the fragile small businesses. This is antithetical to the approach of close support to small farm businesses, which are considered extremely vulnerable to going under in the absence of funds and a ready market.

Problems were also reported regarding product quality, for example, of grapes considered to be below acceptable quality. However, one of the small farmers supported by AgDevCo has succeeded in continuing to supply bananas and apples to RT's operations, although this supply has been taken up only intermittently. Another of AgDevco-backed unit has continued to supply pork to RT. The potential for bulking up local supply is significant but this will require steady commitment (for example, to guarantee offtake of farm produce).

Farming support to local communities for subsistence and livelihood reconstruction

RT has been supporting horticulture in the resettled and host communities both directly and through the consultancy-led engagement. This has not been on a very large scale, however, and has so far had to focus on establishing food security of the resettled households rather than commercial farming.

Kurima Ne Povo Cubatsirana (KPC): The company's acronym roughly translates as "planting with the people". This consultancy aims to introduce new techniques and other assistance to local farmers. The approach is described as "conservation agriculture". By May 2014, the company was in the process of measuring the production from local farmers involved in its assistance programme as a way of gauging the impact and effectiveness of its intervention. The project initially started out with the resettled community in Mualadzi. In May 2014, KPC was still enlisting members of the resettled community in the support project, which was planned to restart in the new agricultural season in October 2014.

RT established a KPC-run farm support project involving vegetables and pig farming for around 40 families in each of Benga (mostly host families near mine operations) and Mualadzi (a resettlement village located 40km from mine operations). A total of 80 families were involved in both locations. Each farming unit employs three persons on the average, totalling about 240 workers involved in this project.

Initially, many of the supported farmers worked mostly on their own using traditional farming methods on the two hectares of land allocated per family. Only approximately four months of farming takes place yearly. Five experienced farm extension technicians are contracted by KPC. Much of the project's focus is on horticulture. During the rainy season, the farm technicians go to the area allocated for planting near Mualadzi to assist participants from the community. During the dry season, they manage a gardening project to demonstrate farming techniques to locals.

Produce cultivated includes tomatoes, onions, carrots, cabbages and lettuce. A small group from the previous year's training had started producing for family consumption, with a small

surplus sold to Bazale, a supermarket chain. A homeless children's project in Mualadzi was given priority access to the first harvest from the demonstration fields.

The horticultural demonstration project is located near the community at about 1 km from a drinking water source. Since horticultural practice is especially water intensive, the scope for upscaling the project is limited. There is a shortage of arable land in close proximity of this water source. Lands around Mualadzi and its vicinity are also unsuitable for vegetable farming, although there is potential to develop these projects close to the Muarazi river, for example.



Demonstration project at Mualadzi

During the rainy season, products farmed include maize, sorghum, *djejeriri*, *chitowe*, sugar, beans and sunflower. In the preceding farming year, there was good harvest although the project was on a very small scale with only 5 lines/ridges of each produce farmed. KPC's principal staff visit technicians in the field every fortnight to monitor activities and assess progress. About 580 local people could be potentially be enlisted for the farm demonstrations. However, only about 250 people have so far taken up the opportunity, which reflects the difficulties of adaptation to new practises and technology for most of the resettled households.

Ideally, relocated families should be directly targeted with capacity-building interventions and livelihood programmes supported by companies in collaboration with local authorities within a partnership framework designed to help community people to develop local supply businesses. This can be gradually up-scaled and extended to supply the bulk of locally available materials such as food and other provisions needed at mining operations in Tete. However, this promising form of community engagement based on integration of traditional CSI with relocation operations remains difficult, if not improbable, in the short to medium term.

Opportunities

In 2012, RT pledged to spend USD 160 million on local procurement activities in the province. The company established a Business Centre in July 2012 with the aim of boosting the involvement of Mozambicans in Rio Tinto's mining projects. The total figure for RT's local procurement of catering, transport and other services in 2011 was estimated at USD 120 million with the company claiming that 80 per cent of these contracts were awarded to Mozambican companies (*Allafrica.com*, 30 August 2012).

Although Rio Tinto has recently divested from the Benga mine, these figures indicate the potential opportunity for local procurement that this one mine could provide. Collaborative or joint initiatives between two or more of the companies to support regional agricultural and enterprise development could augment company-specific efforts even further. Both the direct capacity of local farmers to supply mining companies and a broader local market need to be developed in tandem.

Targeted intervention to support sectors such as agriculture can significantly expand the capacity for local procurement, but this needs to be implemented within a clear, well-resourced plan and vision. Forming functional partnerships with local stakeholders and consultancies possessing the relevant expertise (including farming support and extension organisations like KPC and AgDevco) could also bring significant rewards.

Challenges

In general, local agri-businesses face stiff external competition from the substantial food supplies coming in from neighbouring countries like Zimbabwe (with a relatively large share) and Zambia (comparatively smaller quantities). Most of the premium quality products are said to come from South Africa. Other foreign branded (especially European and American) products such as sauces are imported through Malawi and elsewhere.

The rise in the number of mining operations in Tete has seen an increase in both the volume of foreign products and new entrants, driving up competition among suppliers. Some brands have unveiled plans to appoint a local supplier or franchise for their products. This is expected to bring greater stability and formalisation to the foreign supply market but such changes may take up to two or three years to take hold. In addition, the growth in demand for air freight into Mozambique to supply the booming coal operations as well as the oil and gas industry in the Rovuma basin has led some foreign airfreight companies to increase the frequency of their flights. For example, Kenya's Astral Aviation flights from Nairobi to Pemba (in Mozambique's Cabo Delgado province) have increased from once to twice a week. Invariably, this further increases the volume of external supplies into the local market, and arguably at the expense of local suppliers. Whilst RT's procurement experts see the ongoing realignments in the region's supply market as disruptive, they expect this to settle down in the long-term.

A major concern for the company was the security of supply. This is said to be at the heart of the company's thinking on sustainability. RT initially conducted a survey to ascertain the minimum monthly supply that is guaranteed from local sources. This was continually checked and monitored and then reviewed every three months. It was finally established that large-scale sourcing from external food markets was inevitable given the constraints in the local supply market. The risk to workplace relations of poor quality catering is considered as serious by the procurement staff. One scenario that could lead to this is a sudden coordination failure in the poorly developed local food supply chain. This is therefore seen as a real challenge from the company's operational planning point of view. It was also mentioned that the company's experience on procurement is partly shaped by a recent disruptive price volatility spanning the last two years ago. This led to some RT staff been mandated to collect statistics on local inflation figures every month.

Conclusion

The disruptions to food security and livelihoods of Benga subsistence farmers resettled to Mualadzi means that 'local' local food procurement is likely to be on a very small scale at least for the next 3-5 seasons. At the regional level, however, Tete farmers are regarded by the Benga mine managers as a potential source of sustainable food supply for the mine's operations over the longer term. The plan is to gradually increase procurement from the local agricultural market and also support efforts to upscale this so as to take advantage of the sizeable secondary market beyond the mining sector itself. The company recognised the need to carefully balance concerns about reliability of food supplies with development goals for the local agricultural sector.

Large, international catering companies, such as IFS and Servco, dominate the supply of food and catering for the mines in Tete province. They often include cleaning, laundry and other services in a suite of 'turnkey solutions' for larger procurement contracts. In this market, it is unrealistic to try to replicate the direct local food procurement model of Tancoal's smaller, more isolated mine in Ruvuma province, Tanzania. Rather, the community relations and procurement functions of mining companies in Tete will have to maintain and increase due diligence over their catering service providers to ensure that local food supply chains are developed and supported. The competitiveness of the tender process, selection criteria that prioritize local food sourcing, and the size of individual catering contracts are important success factors for this indirect implementation of local food procurement policies.

Conclusion

This study provides a comparison of two coal mines in neighbouring, developing countries, where the socio-economic circumstances of local communities are fairly similar. Subsistence farming is the main livelihood and the overriding challenge in both cases is to strengthen local supply chains and capacity to upscale food production. Partnerships between the companies, local community-based organisations and development assistance, such as the AgDevCo initiative and the AusAID grant to MWO, has facilitated this in both cases.

Despite the similarities, the two case studies also show how different the opportunities and challenges for local food procurement can be in each specific context. Three contextual factors relating to the location of the mines were identified as relevant:

- Accessibility of the mine to air and road transportation;
- Proximity of the mine to a large urban centre;
- Proximity of the mine to other mines in the region.

The importance of cost, quality and reliability of food to supply chain management decisions of mining companies cannot be overlooked. The competitiveness of local suppliers and catering services in these respects was a consideration for both companies. The inaccessibility, remoteness and isolation of the Mbalawala site relative to the Benga site meant that the local goods and services were more competitive with external suppliers due to higher transport costs and the smaller market of a single mine (versus the mining-intensive region of Tete).

These factors were not within the control of the mine management. Therefore, while one can agree with Hanlin & Hanlin's (2012) conclusions that "firm-specific strategies have an important bearing on the outcome" (p. 469) and that "the attitudes and actions of individual supply chain managers" play a significant role (p. 473), this research shows that contextual constraints should not be underestimated. An interesting line of further inquiry would be to examine how the corporate policy of a transnational company like Rio Tinto on local food procurement is implemented more or less successfully at different mine sites around the world and how much this has to do with the three geo-spatial factors above. A second avenue for further research would be to test the relevance of these three factors to the food procurement practises of a larger sample of mines.

Although business considerations were important, the role of local food procurement in promoting good community relations was well-recognised in both cases. Factors within the control of "firm-specific strategies" could be identified:

• Including local procurement and employment conditions in contracts with catering services and close monitoring of subcontractors in this regard;

- Implementing a local employment and skills development policy, as local workers seemed more amenable to eating local food than ex-pat workers (this observation at Mbalawala should be tested for a larger sample of cases);
- Menu-planning around seasonal produce that is locally available;
- Decentralising decision-making on food purchases to a local chef or caterer who speaks the local language and has good networks in the community.

In terms of development effects, the potential in the Tanzania case study lies in the longevity, rather than the scale of coal mining in the region. The mine is planned to operate and expand over the course of more than 50 years. The market for food and other services provided by the mine will benefit a relatively small number of people. However, it could act as a springboard to other, more profitable and sustainable small business development for the local communities, such as charcoal briquette-making. It will provide local livelihoods and community development in the long-term, rather than regional economic growth based on large-scale agriculture (as in the case of Tete province, Mozambique and the Beira Agricultural Development Corridor). However, this case has set a best practise example for other mining companies to follow, which could be applied to new anticipated investment in the region and throughout Tanzania.

The anticipated scale and duration of coal mining in Tete province, Mozambique means that the potential development effect of a successful local food procurement strategy is considerable, particularly if integrated into multi-stakeholder regional development plans, such as the Beira Agricultural Development Corridor. However, local food procurement is conducted by catering companies, who negotiate contracts with local suppliers. It is therefore less direct and flexible than the process used by the smaller company in Tanzania. One could say that both the opportunities and challenges for local food procurement in this case are greater than in the Mbalawala case study.

Local content policy being drafted in both countries should be nuanced enough to address the potential for local food procurement by mining companies in different locations and at different scales, as indicated by this research.

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List of interviews

Mbinga district, Ruvuma province and Dar es Salaam, Tanzania, interviews:

- 1. Leah Kayombo, General Manager, Mbalawala Women's Organization (MWO)
- 2. Edward Mkony, Tancoal Community Relations Manager
- 3. David Mason, Intra Energy Corporation, Director
- 4. Tarn Brereton, Tancoal Chief Operating Officer
- 5. Hamid, Site manager, Tancoal
- 6. Joyce Haule, Operations Manager, MWO
- 7. Ritha Semizigi, MWO financial manager
- 8. Arafat Sinare, Legal counsel to Tancoal
- 9. Bosco Kawonga, MWO chef for Ngaka mine
- 10. Kristom Mbawala, Ruanda village elder, leader of Usilale Women's Group
- 11. John Raphael Komba, Ruanda village chairman
- 12. John Nyambo, Ntunduwaro village chairman

Informal and group meetings with Ruanda and Ntunduwaro villagers and the MP for Mbinga district.

Tete and Maputo, Mozambique:

- 1. Rama Krishna, Procurement Manager, RTCM
- 2. Samuel Matusse, Superintendent Social Development, RTCM
- 3. July Choto, KPC Farm Technician
- 4. Kegan, KPC Field Supervisor
- 5. Mugumwa, KPC Regional Manager
- 6. Lucitano Francisco J. Fernando, UPCT Programme Official
- 7. Dorica Amosse Nota, UPCT Presidenta
- 8. Freddy Estevene, UPCT Vice President
- 9. Rosanne Whalley, AgDevco Country Manager
- 10. Mayanyi Sande Resettled Mualadzi Poultry farmer
- 11. Paulo Domingos, World Vision Programme Officer
- 12. Emmy Bosten, EnergyWorks Director
- 13. Ivo Lorenco, General Manager Communities and Social Performance, RTCM
- 14. Jennifer Bowcock, Principal Advisor Communities and Social Performance, RTCM (telephonic interview)