#### LONG-TERM SOCIO-ECONOMIC EVALUATION OF THE MT HAGEN MARKET REDEVELOPMENT

# B.F Mullen<sup>1</sup>, Hui-Shung Chang<sup>2</sup>, J. Anjen<sup>3</sup> and Lilly Be'Soer<sup>4</sup>

## **ABSTRACT**

The redevelopment of the Mt Hagen Market in 2006 replaced informal infrastructure with robust, well-designed structures capable of supporting the growing trade in fresh produce in the Highlands of PNG. A long-term socio-economic study of the redevelopment was undertaken in April 2013. Characteristics of market management and impact on agricultural models, urban women and street youths were assessed. Qualitative and quantitative research included: desktop analysis of documents and reports; interviews with key stakeholders; and analysis of primary and secondary data. The market has produced positive economic and social outcomes for an estimated 1000 farmer-sellers and 1,500 resellers, the majority of whom are women. Resellers, rather than farmers, have become dominant in market selling. There is limited capacity to cater for occasional farmersellers as selling benches are fully allocated. As a result, many smallholder farmers now sell to resellers. Vegetable production in the Highlands Region has increased significantly since 2010, largely in response to increased demand for fresh produce from PNG's booming resource sector. Much of this increased production is now channeled through the Mt Hagen market - the largest fresh produce market in PNG. Concurrent with this increase in production has been an increase in specialization by farmers. The quality of produce entering the market is generally very high. However, there have been no significant improvements in the postharvest handling and transportation of produce. Wamp Nga Holdings, the original market manager, developed wellconsidered plans for service delivery and governance at the market. The market functioned effectively during its first two years of operation. A take-over of market management in late 2008 commenced a rapid decline in service delivery and community engagement. The planned inclusive board of trustees was abandoned, no sinking fund was established to provide for maintenance and future developments and market staff became predominantly focused on fee collections rather than service provision. The Mt Hagen Market remains a preferred place to buy and sell fresh produce for Highland's communities. The robust market infrastructure endures tenaciously despite its neglect and could be renovated to its former excellence with relatively small investment.

<sup>&</sup>lt;sup>1</sup> UQ International Development, University of Queensland, Australia

<sup>&</sup>lt;sup>2</sup> Institute for Rural Futures, University of New England, Australia

<sup>&</sup>lt;sup>3</sup> Productive Partnerships for Agriculture Project, PNG

<sup>&</sup>lt;sup>4</sup> Voice for Change, Jiwaka, PNG

#### 1. Introduction

The Mt Hagen market, the largest and most diverse fresh produce open market in Papua New Guinea, was redeveloped with assistance from the Australia - PNG Incentive Fund (PNG-IF) at a cost of K7.5 million. It was officially opened on 6 December 2006 and continues to support very large movements of fresh produce and people every day. An immediate evaluation conducted to March 2007 (Anon 2007) reported that the new market had created formal employment opportunities and significant informal income-earning opportunities for growers and sellers in and around the province and a substantial increase in the volume of rural produce traded in the province.

In 2013, the Incentive Fund commissioned a study to assess the impact of the Mt Hagen Market on agricultural models, urban women and street youths, and lessons learned in terms of market management structures. It also aimed to provide recommendations to PNG-IF Management Group to assist in future decision-making and planning when assessing proposals for future market development. Specifically, the study sought to identify lessons to be learnt about sustainable management of PNG's produce markets from the experiences of the Mt Hagen markets.

Both qualitative and quantitative methods were used for data collection and analysis, including rapid rural appraisal, informant interviews, focus groups, and demand and supply analysis. Results related to agricultural models, urban women and street youths have been reported in Chang *et al.* (2014). This paper reports findings related to the provision of services following redevelopment, trends in selling practices, and specific findings relating to sustainable operations and financial management of the Mt Hagen market.

## 2. Methodology

The study used both qualitative and quantitative research methodologies, including:

- Desk analysis of relevant documents and reports;
- Interviews with key stakeholders and government agencies in POM: AusAID, Incentive Fund, Department of Planning and Monitoring, DPLGA Legal Division, Provincial Agricultural Advisor;
- Interviews with key stakeholders in Mt Hagen: market management, sellers, growers, and market users, CBOs, NGOs and agricultural organisations;
- Analysis of primary and secondary data and financial reports; and
- Analysis against key findings and recommendations.

#### 2.1 Qualitative analysis

Qualitative components of the research were based on focus groups and personal interviews with key stakeholders. Semi-structured questionnaires were prepared and used to ensure consistency of topics covered. This also facilitated determination of patterns in responses.

Personal interviews were conducted with: AusAID and Incentive Fund; Policy development organisations; women's affairs organisations; agriculture sector organisations; national, provincial and local level government representatives; Mt Hagen Market management; NGOs and cooperatives; wholesale produce buyers; institutions purchasing at the market, market vendors - more than a hundred were interviewed; and 40 consumers.

Focus groups were conducted with market vendors, street youth, and fresh produce growers to ascertain their opinions on the impacts of market redevelopment on their livelihoods, and services currently and formerly provided through the market.

### 2.2 Quantitative analysis

Rapid rural appraisal and market survey were used to collect data on the following:

• The numbers of crops sold in the market and by gender;

- The number of sellers in the market, by crop, by gender, and by selling location (from the bench vs on the floor);
- The number of wholesale and contact buyers in the market;
- Frequency of shopping in the market and money spent, by consumers and institutional buyers;
- Price paid and received, and gross margins, for key crops;
- Number of bags traded in the market and in stock;
- The number of people using toilets, by gender;
- Estimates of market takings and expenses.

Financial reports were obtained from Hagen 2 Investments and Wamp Nga Holdings to determine the financial viability/profitability of the market<sup>1</sup>.

#### 3. Results and Discussion

# 3.1 Impact of redevelopment on provision of market services

Table 1 provides details of the planned level of service to be achieved through market redevelopment, compared with what was actually achieved upon completion and what remained functional by 2013. Achievements upon completion against the plan were impressive, with most targets being met or exceeded. Immediately following redevelopment market services were considerably superior to other markets in PNG. The market was equipped with: 1800 selling spaces for fresh produce, livestock and handicrafts; an administration building; male and female toilets; a wholesale building with cold storage facilities; reserve water tanks; standby power; baby nappy change rooms; an aid post, shops and office spaces; an agricultural extension and market statistics office; a public address system and a theatre for community awareness campaigns; a police post and security offices; telephone; and EFTPOS machines. By 2013, many of the services provided in 2007 had ceased to function, or functioned well below acceptable standards. However, the market has continued to function as the market trading centre for fresh produce in the Highlands Region.

In 2007, the new market created formal employment opportunities for approximately 50 staff and countless informal income-earning opportunities for growers and sellers in and around the province. Improved working conditions and security encouraged more women to engage in agriculture and to earn an income as retailers of fresh produce. Initial reports indicated a substantial increase in the volume of rural produce traded in the province and expanded trade to other parts of PNG (Anon, 2007). Importantly, the redeveloped market provided a safe location for women to sell their produce. Although we were unable to ascertain the volume of produce traded, these trends have continued based on the increase in the number of active sellers and reports from focus groups.

The initial provision of 1800 under-cover, bench selling spaces was a substantial improvement on the previous market, which had no benches and no cover for the estimated 500 sellers who used the location. Unfortunately demand for selling spaces has rapidly outstripped supply. In addition to the 1800 bench spaces, a further estimated 700 selling spaces have been allocated in the laneways, drains and other floor areas. Much of this space is uncovered and unclean.

Whilst the market continues to be a preferred outlet for sales of fresh produce in the Western Highlands and Jiwaka Provinces, almost all of the services initially provided are no longer available. Details of the state of services as of March 2013 are provided in Anon (2013).

<sup>&</sup>lt;sup>1</sup> Despite repeated requests for comprehensive financial reports only partial reports were made available.

Table 1: Achievement of performance indicators in March 2007 and now (March 2013)

Sub-component indicator	Achievement status March 2007	Achievement status March 2013
Up to 2000 selling places	Original design was for 2000 selling	1800 bench places under shelter; approx
(minimum 1400)	spaces but final construction had 1800	700 extra selling spaces were created and
		occupied by sellers on floor & in laneways
1 security office	Security office in the admin block;	Security office rarely staffed; Police post
	Police post on ground floor	intermittently manned by a single officer
	intermittently manned	
Market entries: 2 public, 1	2 wholesale; 4 public; 1 waste	2 wholesale; 4 public; 1 waste collection
seller	collection	
2 produce wash areas	Three bays with 40 taps functioning	Not operational - vandalised in 2010 and
	effectively	not repaired
Overnight storage area for	No specific overnight storage	Under bench areas used for storage
produce	constructed, Under bench areas used	
Separate livestock area	Forty cages built with drinking and	Bench tops now used in addition to a few
with cages	feeding troughs in separate area on	remaining cages – none with
	floor	drinking/feeding troughs; Directly adjoin
		fresh produce areas
1 organic refuse collection	Waste bay constructed with gate	Operational, but several additional
bay	specific for vehicle to remove waste;	unofficial waste areas exist
	Waste disposal needed attention	
Market halls & structures	Quality construction with good natural	Quality structures remain with minor
as per design	lighting	deterioration; Light transmission through
		alsynite sheeting has deteriorated
Ablution blocks	Water connected, well cleaned; Cost	Women's block is clean; men's block
	K1 per use; Toilet paper issued by	intermittently cleaned; Cost K1 per use;
	ticket sellers; Training on use provided	Toilet paper issued by ticket sellers; Sinks
		have been vandalised; No running water;
		No training provided
Perimeter security fencing	1.8m high steel picket fence; Five	In place and maintained although
	gates limit efficacy of fence for	regularly vandalised; Police want number
	security	of entrances reduced to improve security
Paving and concrete	Paved with concrete of paving brinks;	Pavement still in good condition - some
walkways	Extensive sub-surface drainage was	slumping; Ponding of water in certain
	installed	areas due to blocked drains and slumping;
		Much of the paved area is covered in
		muddy water
Temporary	Not provided	Not provided
accommodation for		
market users		
Public address system	Installed and used for announcements	Amplifier and microphones stolen;
	on hygiene, keeping laneways clear	Speakers still in place mounted high in
		market ceilings; No longer functional
Round-house theatre	Used for theatre presentations on	No longer used for public awareness;
	HIV/AIDS awareness	used by wholesalers for re-packing and as
		rest area
Awareness/education on	Awareness on hygiene via PA system	Dysfunctional - mixing of poultry and
hygiene practices	and instructions in toilet blocks, by	produce, men's toilets, waste
	market staff	management, and water drainage require
		attention; PA system broken

# 3.2 Impact of market redevelopment on selling practices

Selling practices at the Mt Hagen Market have changed significantly since redevelopment. Prior to market redevelopment, most farmers sold their own produce at the markets. Post redevelopment,

the situation is more complex (Table 2). By 2013, fewer farmers were retail sellers than in 2007 and, by preference, more were selling their produce in bulk. Bulk selling was very quick compared with retailing, thereby enabling farmers them to concentrate on production. Bulk selling also enabled farmers to return home early, thereby avoiding the personal safety risks associated with travelling at night or overnighting in Mt Hagen. Production trends were also changing, with farmers specialising in production of 2-3 vegetables to achieve efficiency gains, rather than growing small volumes of a large number of crops.

The class of bulk buyer/resellers known as "black marketers" had expanded considerably. Black marketers are predominantly women who purchase from farmers in bulk and retail to final consumers/households. The term reflects a negative sentiment towards people who benefit financially from the hard work of others – in this case, black marketers benefiting from hard-working farmers.

By 2013, a new class of traders had established who acted as the middlemen between farmers and resellers/contract buyers (referred to as Market Traders in Figure 1). These traders, predominantly women, specialise in buying and selling in bulk. There were more than 100 women buying in bulk from farmers to re-pack and on-sell to either those who occupy the benches or contract buyers from the mines. Most of these women were from Mt Hagen Central, Dei Council, Kindeng, Kuli, and Tomba.

The number of contract buyers had also increased substantially by 2013. These buyers purchased in bulk from farmers and market traders on behalf of local businesses such as Hotel Kimininga, Best Buy, Highlander Hotel, Porgera mine, the PNG LNG sites, Ramu Nico, Ok Tedi, etc.

Wholesalers, defined as registered wholesaling businesses that specialised in supplying supermarkets and catering services in Port Moresby and around the country, had not changed in number since 2007.

Table 2: Changes in seller types prior to the new market, in March 2007 and in March 2013

Seller and buyer types	Before 2006	March 2007	March 2013
Sellers – Retail <sup>1</sup>	200 – 300	1,200 – 1,800	1000
Sellers – Wholesale <sup>2</sup>	100	500 - 800	1000-2000
Bulk buyers – Retail <sup>3</sup>	160	400 - 500	1,500
Bulk buyers – Wholesale <sup>4</sup>	3	8	8
Bulk buyers - Contract 5	4	<10	71

<sup>&</sup>lt;sup>1</sup> Subsistence farmers/producers who sell their own products (includes manufacturers of bags, jewellery, clothing, etc)

Figure 1 shows the selling pathways for fresh produce from the farm to the end users. Resellers have become a dominant force in the market since its redevelopment. The Mt Hagen Market Redevelopment Immediate Assessment Report (Anon, 2007) indicated that resellers accounted for 40% of the sellers. By 2012, that found that the figure had increased to about 80% (Anon, 2012). Some of the full-time resellers were previously farmers. These resellers reported that the change from farmer to reseller occurred because re-selling provided steady income and more profit, and was less work than farming.

The large number of resellers has created a problem for farmers wanting to sell in the market, as resellers have permanently reserved the bulk of the selling spaces. A significant number of farmers were selling in walkways, courtyards within the market, or in pathways outside the main market structure without shelter and surrounded by pools of dirty water. A head count of sellers of 10 key

<sup>&</sup>lt;sup>2</sup> Producers who sell in bulk to market traders (resellers, wholesalers, or contract buyers)

<sup>&</sup>lt;sup>3</sup> Buvers who purchase for resale in the market themselves (ie resellers or black market sellers)

<sup>&</sup>lt;sup>4</sup> Buyers who represent registered wholesaling businesses

<sup>&</sup>lt;sup>5</sup> Buyers who purchase for supermarkets, mines, schools, etc

crops revealed that of the 1371 people counted, 40% were selling on the floor. The situation was worst for women selling local vegetables, with 60% (278 out of 535) selling on the floor. The alternative for many farmers was to sell in bulk to market traders (at wholesale prices) or sell at alternative markets.

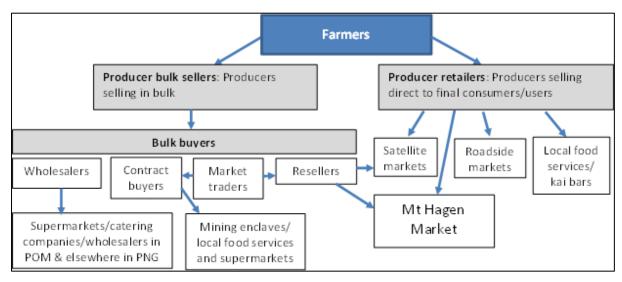


Figure 1: Types of sellers in the Mt Hagen Market

### 3.3 Market management

The proponent organisation for the redevelopment of Mt Hagen Market was Wamp Nga Holdings Ltd. Wamp Nga Holdings Ltd is jointly owned by the Mt Hagen Rural Local Level Government (RLLG) (60%), Anglimp LLG (20%) and Neibilyer LLG (20%), however, the market asset is solely owned by Mt Hagen RLLG (Anon. 2004). Through circumstances that are not fully understood, Hagen Rural LLG took control of the Mt Hagen Market from Wamp Nga Holdings in late 2008. According to stakeholders interviewed, the takeover coincided with a rapid decline in law and order around the market place and the delivery of services and the maintenance of market facilities.

Wamp Nga Holdings outlined its intentions for management of the market in late 2006 in its Program Completion Report (Anon 2006). In line with the agreement with the Incentive Fund, a Market Board of Trustees was to be set up to represent the interests of stakeholders. A Market Management Plan was drafted and outlined an excellent range of initiatives in considerable detail, (Table 3).

Table 3: Market management, finance and administration and services as per the Wamp Nha Holdings Management Plan

Management structure	Finance and Administration	Market services
Board of Trustees - composition,	Banking and finance	Rules and regulations for market
roles, functions	Ticketing system	use
Finance committee	Sinking fund for maintenance &	Social information campaigns
Management roles & staff	expansion	Waste management plan
compliment		Security plan
		Asset maintenance plan
		Agricultural extension support

The senior management and operational management structures proposed by Wamp Nga Holdings in the Completion Report are presented in Figure 2. Figure 3 presents the management and operational structure used by Hagen 2 Investments in 2013, based on conversations with market management.

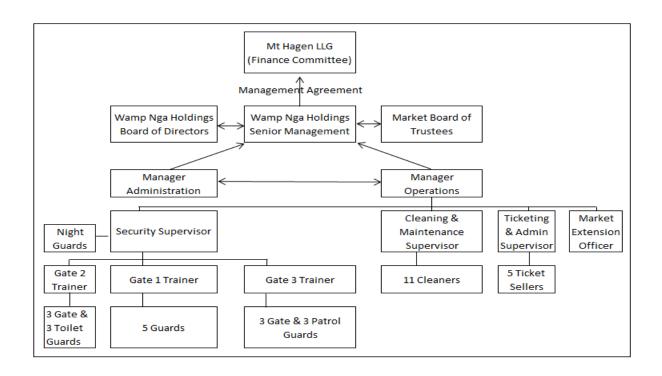


Figure 2: Management and operational management structures proposed by Wamp Nga Holdings in the Completion Report

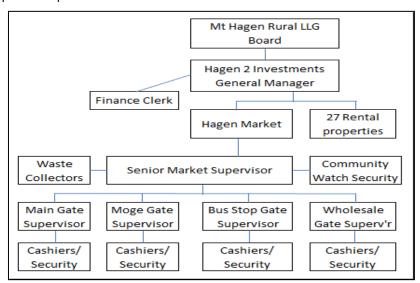


Figure 3: Management and operational structure used by Hagen 2 Investments in 2013 (based on conversations with market management)

The number of market operations staff had grown from an initial cohort of 49 in 2007 to the current cohort of 78. Growth in staff numbers was primarily in the "security" staff. According to staff, appointments were made in relation to clan obligations of successive managers and Board members.

A further confounding issue in the market is the presence of "taxi boys" – youth who carry produce and undertake other tasks for a fee. Market women had mixed opinions of taxi boys, with some valuing their service and others and others reporting being intimidated to pay unauthorised bench and carriage fees, perceiving this to amount to low-level extortion. Some means of regulation of taxi boys is clearly required so that they provide a service for a reasonable fee, rather than becoming another component of corruption around the market.

Details of the current staff roles and responsibilities were unknown by management, but appeared to be top-heavy with staff who collected fees from vendors. These were apparently security staff.

There were three to four such staff at every location at which money was to be collected. The toilets, for example, had up to eight staff at any one time, split across the men's and women's entrances. Despite these large staff numbers, on all measures the quality of services provided had declined. Supervisors reported having difficulty disciplining staff because of the political appointment of staff. That is, staff were unable to be sacked or punitively reprimanded because they were supported by Board members or senior management. This had resulted in a lack of attention to provision of services, including security, maintenance and cleaning. Rather than provision of services, a culture of rent-seeking behaviours had become entrenched and was unable to be changed by the existing management.

Wamp Nga's plan for management of the markets was presented in the Project Completion Report. It comprehensively outlined procedures for oversight, maintenance and provision of services, most of which were abandoned by the end of 2008 and in some cases, were never established. The establishment of a Board of Trustees to provide strategic oversight was particularly impressive. The Board was to comprise representatives from women's groups, agriculture sector, business houses, farmers, government departments and others. The Board's role was to set strategies for: asset sustainability; expansion of facilities; development of satellite markets; public awareness programs; market health and hygiene; and improved market management.

### 3.4 Financial sustainability

Efforts were made to obtain financial records from both Hagen 2 Investments for the years 2009 to 2012 and from Wamp Nga Holdings Ltd from 2007 and 2008. Hagen 2 Investments reported having no annual accounts and so was unable to provide this information. The company's General Manager reported that there was no positive account balance at the end of each year. The General Manager provided a list of expenses incurred each year and an estimate of daily and annual income. Financial summaries for 2011 and 2012 were prepared based on this information and need to be treated as estimates only (Table 4).

Gross income from the ticket sales, rent on shops and chiller rooms and from toilet charges was approximately K1.2 million annually. Salaries and allowances for 78 staff, combined with smaller allocations to community projects, dividend payments to Mt Hagen Rural LLG and other expenses utilised the majority of annual income in both years. Only 2012 estimates are provided here as there were few changes in 2011. The only significant differences from 2012 accounts were that in 2011 there was no school project funded and the dividend paid to Hagen Rural LLG was K145,000.

Wamp Nga Holdings lost many of its financial records when it was forced to vacate its offices in the Wamp Nga Building in central Mt Hagen and relocate to offices at the Kimininga Hotel. Wamp Nga did find a bank reconciliation for the first 7 months of operations of the market (Annex 4) which indicated an annual income of approximately K1.033 million. Given that the number of sellers has increased significantly since early 2007, the estimated income for 2011 and 2012 seems reasonable. However, to the best memory of the current CEO, the market returned a gross income of more than K3 million in the final year that it was operated by Wamp Nga Management. If correct, the figures provided in the hypothetical budget that we have produced (Table 4) are extremely conservative and profits would be expected to significantly exceed our estimates. Based on our estimates of income the potential for profit generation is substantial. Assumptions in the hypothetical budget include:

- A conservative estimate for daily ticket sales of K4,500;
- Sustaining the current cost of staffing but with considerably fewer, better trained staff;
- Maintaining a restructured Market Board but not the Hagen 2 Investments Board;
- Reconnecting water and paying associated fees;
- Including a budget for maintenance of the market asset;
- Removing the entertainment allowance for the Administrative Manager

- Including fees for annual audit of accounts; and
- Making a distribution to owners of the market (according to IFA) based on a reasonable return on investment.

A relatively fraud-proof ticket sales system was operated by Wamp Nga during the first two years of the market's operations. During these years income was apparently very high given the number of sellers at that time, initially limited to the 1800 bench spaces. Our estimate for March 2013 was that sellers numbered approximately 2500 within the market. If sellers paid for a selling space only, this would result in income of K5,000/day. However, sellers are charged by various systems, including by number of bags they bring to sell. Wholesale vendors selling outside the market were also expected to pay K2/bag to market management. It is highly probable that a single bag of produce could incur several fees during a single day. For example, a wholesaler would be charged for each bag of produce. Then a reseller would be charged when bringing the same bag into the market. Inside the market the reseller might sell the bag to a contract buyer who would also pay K2 to market management. So the same bag of produce would attract fees to market management of K6 in one day. It is very probable that fees of K8000-K10,000/day could be generated from produce sales. With additional income from shops, chillers and the toilets, income could easily reach K3 – 4 million/year if the market was to be efficiently operated.

A dividend of K145,000 was paid to Hagen Rural LLG in 2011, but only K42,000 was paid in 2012. Contributions were apparently made to school building activities at Koge and Kagamuga in 2012. According to Wamp Nga Holdings, significant dividends were paid to the three LLGs when they managed the market (2007/2008), but no figures were available to confirm the size of payments. The potential for much higher dividends exists with more attention to fraud-proof ticketing systems.

Table 4: Estimated income and expenditure for 2011 and 2012 and potential income and expenditure with improved management

		2011	2012	Potential
Income	Ticket sales	961,000	961,000	1,395,000
	Toilet	186,000	186,000	372,000
	Chiller rooms	9,600	9,600	24,000
	Shop rent	16,800	16,800	42,000
	Taxi boy registration			155,000
	Total income	1173,400	1,173,400	1,988,000
Expenses	Staff/staff training	667,000	667,000	628,000
	Board/travel	66000	66000	76,000
	Utilities	145,500	145,500	301,500
	Security	64,680	64,680	64680
	Other	60,000	105,000	80,000
	Total expenses	1,003,180	1,048,180	1,150,180
Net profit		170,220	125,220	837,820
Dividends	Hagen Rural LLG	145,000	42,000	450,000
Disbursements	School projects etc		40,000	
Balance		25,220	43,220	387,820

# 3.5 Characteristics of a high quality market management

Lessons learned from the Mt Hagen Market redevelopment process point to a combination of factors required to achieve sustainable outcomes from programs delivering public services. These can be summarized under headings of leadership, management and the enabling environment (Table 5). Effective strategic direction is best derived from strong leaders, with overt political and

community support, who are capable of providing direction without engaging in operational matters. The effectiveness of public sector boards is commonly identified as a weakness in PNG. Appointments based on merit and ongoing training of directors is required.

There is no reason for asset ownership and operational management to be closely aligned. Indeed, this appears to be the starting point for service decline. Operational management can be tendered out, with strict standards of service delivery being required. Enforcement of standards by the asset owner should be easier where no cultural or commercial ties exist. Management require clear guidelines and protocols, including fraud-proof money collection systems and the power to appropriately discipline staff where required.

The enabling environment impacts capacity to manage a market place effectively. A starting point of land free from disputes is not easy to achieve in PNG and is commonly a factor stalling development. At a minimum, procedures to deal with anticipated issues arising from construction on disputed land should be established. The construction of robust facilities has greatly helped the sustainability of the Mt Hagen Market, despite a general lack of maintenance.

Table 5: Factors required to achieve sustainable outcomes from public marketplace development

Leadership	Management	Enabling environment
Visible political support for quality	Clear mission statement to guide	Land free from disputes
management without	management	Physical asset robustly
interference	Physical asset managed independently	constructed and designed to
No direct role in management or	of service delivery	facilitate efficient
provision of services	Appointed based on merit through	management
No direct role in awarding tenders	open selection process	Services are vandal-proof to the
or in appointment of staff	Subject to scrutiny and penalties by	greatest extent possible
Board of Directors appointed	Board sub-committee	Logistics and location taken
based on merit and ability to	Clearly defined rules for market use	into account in market
represent stakeholders	Minimum standards established for all	design
Proactive re: market as mechanism	services delivered	Structure provides for
for public good campaigns & services	Service providers subject to ongoing compliance monitoring with	additional services such as health clinic, police post,
Proactive in facilitating support	penalties for underperformance	agriculture office, theatre
from provincial departments	Comprehensive financial processes established and complied with	
	Transparent fee structures for market users	
	All staff registered, trained, equipped	
	Specific security arrangements with reporting to senior management	

### 4. Conclusions and Recommendations

The upgrading of retail markets in PNG is essential for income generation activities, strengthening food security, developing rural market linkages and for mainstreaming gender issues within rural development strategies. Hence, upgrading projects should not only improve the infrastructure, but also consider the objectives of poverty alleviation, livelihood improvement and gender equality in rural areas. The initial design of the Hagen Market Redevelopment Project concurred with this and the market was originally equipped with modern facilities beyond shelter, tables, benches, and public toilets. It also included an amphitheater, an aid post, a nappy changing room, an office for agricultural extension and market information services, a police post, and an EFTPOS machine.

The Mt Hagen market redevelopment delivered significant economic benefits to the region. However, there are still issues and problems that must be addressed to sustain and broaden the impact of the Hagen market in the longer term. These include: clarifying ownership and management of market assets; improving the delivery of services in waste management, improving

security services and law and order, maintaining toilets and water supply; and educating the public about market rules and regulations.

Recommendations to improve market function and service provision include:

**Leadership to inspire good management**: Public services will only be effectively delivered if individuals in positions of authority regard these services as important. Progress is unlikely to be made without such leadership. Good leaders need to be identified and supported.

**Asset management Vs service provision**: The market asset and the market services provided should be considered as discrete aspects of any market. The asset should be managed independently of ownership, with a focus on sustainability of service provision.

**Basic market services**: Irrespective of whether services are insourced or outsourced, waste management, cleaning, security and other basic services will only be implemented effectively if there are: 1) minimum standards for delivery; 2) enforcement of these standards; and 3) penalties for failure to meet standards. Standards can be established relatively easily and the management plan developed by Wamp Nga included many of these.

**Additional services**: Opportunities integrate affordable health care, agricultural support and other aligned services should be written into market management plans in detail.

**Staff training and equipment**: Whether outsourced or insourced, staff require ongoing training and equipment to deliver services effectively. This includes appropriate work and safety equipment and uniforms/other identification. This should be part of the management plan.

*Market support systems*: There should be no unregulated staff working at the market. Taxi boys and other such unofficial staff need to be regulated.

*Market rules*: Wamp Nga set out clear rules for what could be sold in the market, operating hours, intolerance of littering, drunkenness, buai consumption etc. These can be used as a guide for new markets. Enforcement is problematic and requires active management.

**Law and order**: Agreements should be developed with local police at the concept stage. This should cover a realistic level of resourcing for the size and complexity of the market.

**Ongoing monitoring**: Experience suggests that even a low level of ongoing interest in an activity will encourage stakeholders to lift their performance and limit the extent to which agreements are broken.

# 5. References

Anon. 2004. Incentive Fund Agreement between AUSAID and Wamp Nga Holdings Limited in relation to Mount Hagen Market Redevelopment. PNG Incentive Fund: Papua New Guinea

Anon. 2006. Management Plan for the Mt Hagen Market. Internal report, Wamp Nha Holdings Ltd: Papua New Guinea

Anon. 2007. Mt Hagen Market Re-development: Immediate Impact Evaluation, March 2007. Internal report, Australia PNG Incentive Fund Report: Papua New Guinea

Anon. 2012. Meeting the demand for fresh produce from the PNG LNG market: opportunities and challenges. Internal report, Fresh Produce Development Agency: Papua New Guinea.

Anon. 2013. Long-term Evaluation of the Mt Hagen Market Redevelopment Project. Internal report, PNG Incentive Fund/UniQuest: Papua New Guinea.

Chang, H-S, Mullen, B.F., Anjen, J. and Be'Soer, L. 2014. Assessing the socioeconomic impact of a rural market: The case of Mt Hagen Market in the Papua New Guinea Highlands. Australasian Agribusiness Perspectives. 98: 1-20