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Organization of the
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**INVESTMENT ANALYSIS
FOR INSTITUTIONAL
PROCUREMENT**

PURCHASE FOR PROGRESS

**COUNTRY CASE STUDY:
MALAWI**

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FOREWORD

Purchase for Progress (P4P), a World Food Programme (WFP) pilot launched in 2008, aims to leverage smallholder agricultural growth in some of the world's poorest countries through supply chain reforms. P4P links WFP's demand for staple foods with the expertise of partners working to strengthen the capacity of smallholder farmers to produce more and higher-quality food, reduce post-harvest losses, access markets and fetch a fair price for their surplus crops. P4P tests and institutionalizes different food procurement models and related programmatic approaches that sustainably promote smallholder agricultural and market development.

At WFP's request, the FAO Investment Centre conducted an investment analysis of the P4P initiative in four countries: Malawi, Mali, Tanzania and El Salvador. The FAO team, which included Alexander Jones, a former senior programme development officer, and economists Lisa Paglietti, Roble Sabrie, Luis DiasPereira and Wadzi Katsande, combined desk reviews with field visits and consultations with the P4P Coordination Unit in Rome and stakeholders at country level.

ACKNOWLEDGEMENTS

FAO Investment Centre economists Luis DiasPereira, Wadzi Katsande, Lisa Paglietti and Roble Sabrie were the main authors of the study, with Lisa Paglietti coordinating the study team.

The team is grateful to the P4P Coordination Unit, which led the preparation of the concept, scope and funding for the study, and WFP staff at country level for participating in meetings and sharing documentation.

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ACRONYMS AND ABBREVIATIONS

ACE	Agricultural Commodity Exchange
ADMARC	Agricultural Development and Marketing Corporation
AMIS	Agricultural Market Information System
ASWAP	Agricultural Sector Wide Approach
BVO	Bid volume only
CAADP	Comprehensive Africa Agriculture Development Programme
CSB	Corn-soya blend
FAO	Food and Agriculture Organization of the United Nations
FO	Farmer organization
GoM	Government of the Republic of Malawi
LRP	Local and Regional Procurement
NASFAM	National Association of Smallholder Farmers of Malawi
NFRA	National Food Reserve Agency
NGO	Non-governmental organization
WRS	Warehouse receipt system

INTRODUCTION

Malawi was selected during the consultation phase as one of the four countries¹ for an investment analysis case study. The objective of this country study was to investigate the main benefits arising from the Malawi Purchase for Progress (P4P) initiative and its impact on the beneficiaries, in particular those not documented by the programme's monitoring and evaluation (M&E) system.

Data review and collection. The investment analysis is a preliminary analysis that focuses on the period from September 2009 to December 2013. The analysis has utilized documentation produced during the pilot phase: baseline data, and market and case studies. The source document is referenced in the text. The analysis was based on the review of consolidated secondary data, including quarterly P4P reports, procurement data and the country implementation plan. When available, the analysis used real procurement and M&E data (e.g. quantities purchased and delivered, price paid). Data pertinent to this analysis are presented in the annex and complemented with information and data gathered from the field visits.

Field visits. The mission was carried out from 12 to 24 January 2014. The team visited Malawi's north, central and southern provinces. The team met with representatives from the Food and Agriculture Organization of the United Nations (FAO) and the World Food Programme (WFP) in country; farmer organizations (FOs); the Agricultural Commodity Exchange for Africa (ACE); the National Association of Smallholder Farmers of Malawi (NASFAM); a medium trader (trading up to 1 000 tonnes of produce); Farmers' World (a private sector buyer and one of the participants in the warehouse receipt system [WRS]); and the Permanent Secretary for Agriculture.

Seven of the 30 FOs were visited in an effort to provide a broad representation of FOs with low, medium and high capacity (see the country highlights chapter for an explanation) and across the main regions in which P4P operated. The interview tools used during the fieldwork comprised focus group discussions, informal discussions and a key informant interview (one-to-one). The team carried out the following:

- Interviews with P4P participating farmers to gather data on the experiences and responses of the target groups. WFP in Malawi buys commodities from FOs.
- Key informant interviews with one small and one large trader: the ACE, a service provider, about its capacity building and marketing platform; a government agricultural extension worker and the permanent secretary within the Ministry of Agriculture and Food Security; and NASFAM, whose members are not necessarily members of the FOs within the P4P. All interviews were technical meetings aimed at gathering the service providers' views on the benefits of P4P and the challenges faced by participating farmers in engaging with a market player such as WFP.

When possible, both quantitative and qualitative data were gathered during the interviews. The quantitative data included production costs reported by farmers. The qualitative data were used to understand the objectives, risks and constraints underlying the quantitative data.

The investment analysis had the following caveats:

- The study did not seek to comment comprehensively on the P4P programme but rather focus on a specific subset of costs and benefits, including externalities not analysed in the mid-term review or in other studies. It was a limited and focused study that complemented and provided data for future programming and P4P reviews, using a country case study approach. This study used quantitative methods complemented by

¹ The four countries selected were: El Salvador, Malawi, Mali and Tanzania.

qualitative research where appropriate to build on the information available.

- The investment analysis focused on the period from September 2009 to December 2013. The pilot was closing and two key staff – a programme assistant and the country coordinator ad interim – responsible for overseeing the closure of the P4P pilot during the field visit remained.
- As a pilot, the P4P programme targeted approximately 2 percent of Malawi's estimated agricultural producers, thus the analysis's scope was limited to the 25 818 farmers who directly benefited from the programme (training, market access). It is assumed, for the purposes of this analysis, that this figure represents all farmers trained by the programme who participated in one training session and is not a double counting of farmers who attended more than one training session.
- The mission was undertaken during the rainy season, making communication and accessibility to some of the FOs difficult; thus, only 7 out of 30 FOs were interviewed.
- Record-keeping at the FO level was found to be consistently poor; five of the seven FOs visited failed to produce their records. The two FOs able to produce records were Mwandama and Cheka, both of which had hired managers to run their FOs as business entities. It is thus difficult to verify from the FO the number and names of its members, the members who consistently sold to WFP, the number of bags sold per member or the details of the people trained.
- The programme produced several case studies that include detailed profiles and a capacity assessment of the FOs. The information provided in the case studies, however, seems largely based on interviews with FO members and therefore subjective, as they were designed as qualitative case studies and focused on specific issues within FOs and on individuals. The case studies were used to inform other observations and guide programming. In each of the field interviews, the membership data (number of members in the FOs) differed from what was recorded in the FO profiles. FO membership numbers have not been consistently updated each year since the pilot's inception, making it difficult to ascertain how the numbers have changed over time.

- When not readily available, proxies and estimations based on anecdotal field findings and discussions with WFP officials were used.

The combination of quantitative and qualitative information may provide a solid foundation for reasonably attributing overall changes to P4P. It is important, however, to note that attributing benefits to a programme is a complex activity and difficult to fully achieve, particularly if limited baseline data that would directly inform a cost-benefit analysis were not available at programme start-up. Furthermore, as P4P is not operating in isolation, careful attention should be paid to all ongoing projects/programmes in the same intervention areas.

This paper includes the following chapters:

- Chapter 1 presents country highlights on WFP activities and the P4P intervention.
- Chapter 2 outlines an analysis of the costs of P4P activities.
- Chapter 3 describes the quantitative analysis of benefits at farmer level as well as a qualitative analysis where figures and data are not available or numeric modelling is not appropriate.
- Chapter 4 develops some financial models to provide further insight into the P4P benefits and sustainability.
- Chapter 5 summarizes key findings and conclusions.

Country Context

The Republic of Malawi is a landlocked country in southeastern sub-Saharan Africa, with an estimated population of 15.4 million² (2011 estimate). About 80 percent of the population lives in rural areas. Malawi has one of the highest population densities in the world at 129.8 people/km.² It is a least developed country, ranking 170³ of 187 countries on the Human Development Index. Agriculture, which has benefited from fertilizer subsidies since 2006, accounts for one-third of gross domestic product and 90 percent of export revenues.⁴ Tobacco accounts for 70 percent (Takane, 2008)⁵ of agricultural exports. The economy depends on substantial inflows of economic assistance from the International Monetary Fund, the World Bank and individual donor nations. In 2006, Malawi was approved for relief under the Heavily Indebted Poor Countries programme, and the US granted Malawi eligibility status to receive financial support within the Millennium Challenge Corporation initiative in December 2007.

A 2012 Government of the Republic of Malawi (GoM) report estimates that 85 percent of households are engaged in agricultural activities. The country's agriculture sector depends heavily on maize, which occupies some 68 percent of arable land⁶ dedicated to food production, and tobacco. Other important crops are sugar, cotton, tea and coffee, which constitute most of the countries' exports.

The agriculture sector is divided into two subsectors: estate⁷ (cash crops cultivated over an area of 12 or more hectares); and smallholder (food crops mainly for subsistence) inherited from the colonial productive structure. Since its independence in 1964, Malawi has pursued an agriculture-based development strategy, and in 2007 Malawi developed the Agricultural Sector Wide Approach (ASWAP), which serves as the investment plan for the Comprehensive Africa Agriculture Development Programme (CAADP). The ASWAP focuses on five pillars: food security and risk management; commercial agriculture, agroprocessing and market development; sustainable agriculture, land and water management; research, technology and dissemination; and institutional development and capacity building.

Country Highlights on WFP Activities and the P4P Intervention

WFP has a 30-year history of local purchases in Malawi. In the 1970s, WFP started buying the locally-produced weaning food, *Likuni Phala*, which is a corn-soya blend (CSB) porridge.⁸ From 2001 until July 2008, WFP purchased almost USD 64 million worth of food in Malawi, representing almost 252 000 tonnes of maize, maize meal, *Likuni Phala*, beans, peas, biscuits, sugar and salt. As a result of the bumper harvests and enhanced local production, WFP increased the level of local procurement from almost 19 000 tonnes in 2001 to over 90 000 tonnes in 2007. The existing country programme started in March 2012 and will be operational until February 2016. The programme's overarching objectives are to strengthen national capacity to improve primary education outcomes, reduce malnutrition among vulnerable groups, improve the food security of communities living in disaster-prone areas and build their resilience to shocks. Through the country

2 UN Data, United Nations Statistical Division - <http://data.un.org/CountryProfile.aspx?crName=MALAWI>

3 2013 Human Development Report - <http://hdr.undp.org/sites/default/files/Country-Profiles/MWI.pdf>

4 CIA The World Factbook <https://www.cia.gov/library/publications/the-world-factbook/geos/mi.html>

5 Agricultural exports account for 79 percent of total exports, according to the ASWAP (GoM, 2010).

6 For both estates and smallholders, maize represents an even higher percentage of smallholdings at 76 percent (FAO, 2000).

7 The Special Crops Act (1968) specifically established a minimum of 12 hectares to cultivate major cash crops.

8 Malawi Country Implementation Plan

Table 1: Comparison of Standard LRP and P4P Food Procurement Requirements

	Standard LRP	P4P
Suppliers	Pre-qualified suppliers (mostly larger traders)	Pre-qualified smallholder FOs and small and medium traders
Contracting mechanisms	Closed tenders	<ul style="list-style-type: none"> • Open tender bid volume only (BVO) • Modified competitive tenders (see contract terms below) • Direct contracts • Forward contracts • Commodity exchanges • Purchasing through WRS • Developing links with food processors
Procurement requirements		
Price	Determined by authorized contracting mechanisms but not to exceed import parity	Determined by authorized contracting mechanisms but not to exceed import parity
Quantities	Preference for relatively large quantities	Will consider much smaller quantities to accommodate suppliers' capacities, however, large quantities are sourced on BVOs
Performance bond	5 – 10 percent	None
Quality	WFP standards (equal to or higher than relevant country standards)	WFP standards (equal to or higher than relevant country standards)
Bagging	50 kg bags and marked with WFP logo 25 kg bags and marked with WFP logo	Not flexible – (For direct contract and soft tenders WFP will supply bags with markings)
Delivery terms	Delivered duty unpaid to specified destination (usually WFP warehouse) on specified date	Flexible – forward contracts or delivery at place

Source: WFP headquarters, Rome.

programme, WFP intends to develop the capacity of more than 2 000 Government staff and some 3 600 local community members, in line with WFP's shift from food aid to food assistance. A total of 122 948 tonnes of food is scheduled to be distributed to some 1 926 400 beneficiaries over a five-year period. WFP will procure most of its food assistance in the local markets, thus supporting the local economy, including smallholder farmers.

P4P scope and approach. The P4P initiative aims to reinforce the capacities of smallholder farmers to improve procurement practices (Table 1), and food processing and commercialization to increase their incomes. P4P seeks to enable smallholder farmers to become competitive cereal suppliers in local and regional markets. This will realign the way

WFP buys food to better address the root causes of hunger.

In response to the GoM's policy shift from emergency response to development issues, including social protection, economic development and disaster preparedness, the Malawi P4P pilot project adopted a twin-track approach: 1) **build the capacities of farmer groups** by working directly with FOs – a bottom-up approach; and 2) **promote the development of platforms for structured trade** – a top-down approach, working through the ACE to use the online public commodity exchange as a marketing platform and engaging various stakeholders to build the smallholder-friendly agricultural markets the country relies on for sustained economic development. P4P operates in six regions: Mzimba, Kasungu, Mchinji, Ntchisi, Dedza and Ntcheu. It engages

with 25 818 smallholder farmers who are registered in 30 FOs.

Procurement modalities.

Table 1 compares WFP's Standard Local and Regional Procurement (LRP) and P4P procurement requirements and mechanisms.

Three procurement modalities are available for P4P in Malawi. The preferred procurement modality representing 88 percent of overall purchases is the open bid volume only (BVO).

1. Direct purchasing (9 percent of overall purchases from 2009 to 2013): This allows WFP to directly negotiate a contract to buy a commodity with an individual FO and removes the element of competition with the broader market. This was one of several procurement modalities piloted under the P4P programme. It aimed to build the marketing capacities of FOs and introduce the FOs to fulfilling contracts with a larger buyer such as WFP so they could eventually compete independently within the market place. As the procurement rules for WFP stipulate that WFP purchases are to be fair and transparent, competitive tendering is the preferred procurement method and direct purchasing under P4P is considered a "special circumstance" because it allows the P4P pilot to do single source procurement to promote the programme goals.⁹ Direct purchase from FOs has to be justified as part of a strategy of moving FOs towards competitive procurement practices within an appropriate and specified time frame. Unlike in a normal competitive tender, WFP is not required to request bids by a minimum of three suppliers. Therefore, the risk to the FO of not winning the contract is removed and the FO is guaranteed (provided the price is agreeable and the quality of the commodity meets the specifications) of selling its goods to WFP. The direct purchase provides a needed introduction to contracting for FOs with limited capacity and little or no experience of selling in the formal market. As such, it is used in P4P Malawi as the first step in the graduation process for new FOs, regardless of size or ability. Although

the element of competition is removed within the direct purchase agreement, the prices remain market related.

2. "Soft" tender (3 percent of overall purchases from 2009 to 2013): The soft tender used to be considered as the mid-point in the graduation strategy, but was stopped in 2011 in favour of the BVO procurement modality described in the next paragraph (see Figure 1 on graduation strategy 2012/13). The soft tender is a closed box tender whereby WFP selects a group of potential sellers who are invited to provide their lowest written offers by a specified time. For FOs (and small traders) registered with P4P, this is normally done in a centralized location, linked to a training activity. This is considered a soft tender for FOs because the performance bond, which in some ways negates the impact of default, is waived for FOs. The reason for this is that FOs have limited access to credit and thus provision of such a performance bond would restrict their participation in the process.
3. BVO (88 percent of overall purchases from 2009 to 2013): The BVO modality is the final step in the graduation process and represents a highly competitive, technical and advanced form of contracting. The BVO system allows a buyer to bid on a commodity with special terms and volume, but without a specific price. This system is unique in that it works like a real time reversed auction. Potential suppliers can offer to sell on the BVO system by placing their offers online or at the physical trading session hosted at the ACE offices. Suppliers compete on an Internet bidding platform and all other terms are pre-determined by the buyer, such as volume or delivery point. When the BVO session closes, the buyer (in this case WFP) will award contracts to the offers with the lowest price until the desired volume is bought. The buyer is free to select any offers or none, if the prices are perceived to be too high. For P4P FOs, the BVO takes place in two formats representing two different steps:
 - Selective BVO (8 percent of overall purchases from 2009 to 2013) whereby the online trading session is restricted to a selected group of sellers (only applicable for P4P participating FOs). In this case P4P can choose to invite a selected group of FOs in order to introduce FOs to the system and allow them to bid against organizations

⁹ WFP 2010 Guidance Note 4: P4P Procurement Plan for Waiver of Competition - Consolidated Request for Waiver of Competition for P4P Food Purchases.

Table 2: Commodity Purchases 2009-2013

Year	P4P Purchases				Non-P4P Purchases Local and Regional			Total Malawi Purchases (TP)	
	COMM. tonne	USD/tonne	VALUE USD	% tonne TP	COMM. tonne	USD/tonne	VALUE USD	COMM. tonne	VALUE USD
Maize									
2009	41	283	11 509	3%	1 439	296	425 802	1 480	437 311
2010	5 349	268	1 432 815	59%	5 048	199	1 003 542	10 397	2 436 357
2011	3 437	201	691 751	2%	77 006	368	28 315 482	80 443	29 007 233
2012	10 215	232	2 367 117	100%	-	-	-	10 215	2 367 117
2013	1 839	239	439 696	20%	6 282	285	1 791 166	8 121	2 230 862
Total	20 881	1 223	4 942 888	14%	89 775		31 535 992	110 656	36 478 880
Maize, Meal									
2009	-	-	-	-	1 767	383	676 934	1 767	676 934
2010	3 679	341	1 256 199	32%	5 136	513	2 634 975	8 815	3 891 174
2011	-	-	-	-	5 306	376	1 994 136	5 306	1 994 136
Total	3 679	341	1 256 199	19%	12 209		5 306 045	15 888	6 562 244
Pulses									
2009	-	-	-	-	1 224	493	603 599	1 224	603 599
2010	1 485	466	691 886	78%	391	513	200 710	1 876	892 596
2011	734	506	371 284	18%	3 402	504	1 712 851	4 136	2 084 135
2012	8 549	507	4 337 491	91%	918	489	448 646	9 466	4 786 136
2013	1 242	509	632 543	59%	918	489	448 646	2 160	1 081 189
Total	12 010	1 988	6 033 204	64%	6 853		3 414 452	18 862	9 447 655
CSB									
2009	-	-	-	-	5 634	415	2 339 182	5 634	2 339 182
2010	1 107	446	494 176	6%	17 269	448	7 744 459	18 376	8 238 635
2011	858	600	514 205	16%	5 361	514	2 757 643	6 219	3 271 848
2012					4 474	634	2 836 836	4 474	2 836 836
2013					17 677	653	11 544 957	17 677	11 544 957
Total	1 965	1 046	1 008 381	4%	50 415		27 223 077	52 380	28 231 458
TOTAL	38 535	4 598	13 240 672		159 252	0	67 479 566	197 786	80 720 237

Source: Author's compilation from official purchasing data.

with similar capacities. The session is essentially a restricted soft tender using the online trading platform. The soft tender process allows for some technical capacity building as it introduces FOs to price discovery mechanisms as well as forcing them to adjust their prices in response to other competitors within the system, while trying to remain profitable. In some instances, capacity was also developed for computer usage.

- Open BVO (80 percent of overall purchases from 2009 to 2013) whereby the online trading session is opened to any seller. In this case FOs bid against fellow FOs, individual and large-scale traders. The prices bid are often determined by economies of scale, so it represents a much higher form of competitive tendering.

FOs bidding on the BVO can also choose to bid using the WRS. The warehouse receipt is a document issued through a licensed warehouse operator that certifies the quality and quantity of a commodity that has been placed by a depositor (a farmer, FO, small trader and/or large trader) into a secure storage facility. The WRS provides smallholder farmers, often cut off from the markets, with the services and the financing that would allow them to benefit from rising prices and demand. It enables them to store their produce safely and sell when prices are higher. It also ensures compliance with quality standards, as the warehouses have to be certified with trained and professional fumigators, thus giving the smallholders access to higher-value markets. Small traders can also benefit from the system and access financing based on the stored stocks,¹⁰ which act as the capital investment, and thus increase their tradable volumes; and sellers can sell to buyers in a wider geographical area than their immediate location. Processing companies, retailers and international buyers have access to a secure and transparent mechanism to trade that can reduce the transaction costs. The proper functioning of the WRS requires a number of elements, including a legal framework, collateral financing, insurance, grading regulation, registered warehouses and a trading system. The WRS adds an increased benefit in terms of delivery security and performance and is a significant advantage in favour of the BVO system.

The WRS began in five locations in Lilongwe and Blantyre and has been expanding. In 2013, WFP supported the certification and running costs of four additional warehouses in different locations in the country, two of these managed by a P4P-registered FO.

FOs that lack storage facilities are disadvantaged as they have to rent warehouses, thus becoming less competitive. Chikwatula quoted monthly warehouse rents of between 15 000 and 20 000 Kwacha (approximately USD 48/month) for a facility with 2 tonnes of capacity. Storage is an important business investment that is used as a key indicator in the development of the FO into

a business entity once the FO recognizes storage's importance.

P4P purchases. During the period under analysis, P4P activities represented an overall 19 percent in USD value terms of WFP procurement for Malawi (Table 2). Maize and maize meal (cereal) purchases represented 19 and 23 percent of the total, respectively; pulses purchased represented 64 percent; and CSB represented 4 percent (TP column in Table 2).

Table 2 and Graph 1 show the purchasing values, quantities and trends over the period under analysis for P4P, regional purchases (which exclude P4P purchases) and the total purchase (regional purchases plus P4P purchases), respectively. The programme initially planned to purchase 31 035 tonnes of cereals, 2 080 tonnes of pulses and 4 542 tonnes of CSB; however, the sale of pulses proved to be more successful because farmers were able to harvest them during periods of drought, though they lost their cereal crop.

Table 3 shows planned versus actual purchases under the P4P. Rainfall for cereal crops was poor during 2011 and 2013. Table 3 shows that cereals represented 64 percent instead of the planned 82 percent, and pulses represented 31 percent of overall actual purchases as opposed to the initially planned 6 percent. Table 3 also shows that the P4P represented an important share of the total purchase, both in terms of financial values and physical acquisition of goods. Acquisition trends over the years are better explained by Graph 1. Over time, P4P acquisition trends demonstrate the preference for the sale of pulses, which provide greater financial returns per tonne and are also hardier than cereals, providing yields despite poor rainfall as happened during the 2011/12 season, while maize yields were generally poor for FOs. The trends also show that as more FOs use the open BVO procurement method, they rely less on WFP as the main buyer in the market. As the pilot was unwinding, key staff were retrenched or reassigned and thus data collection for the 2013/14 season was incomplete.

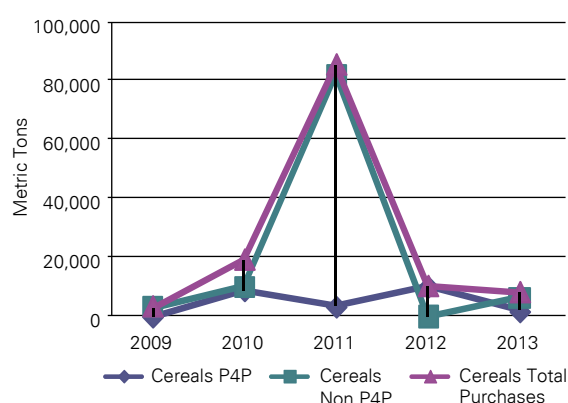
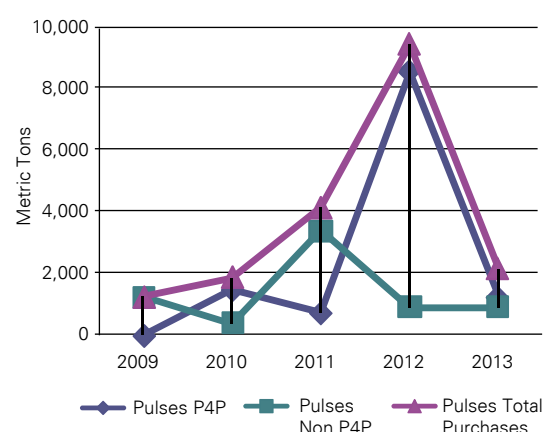
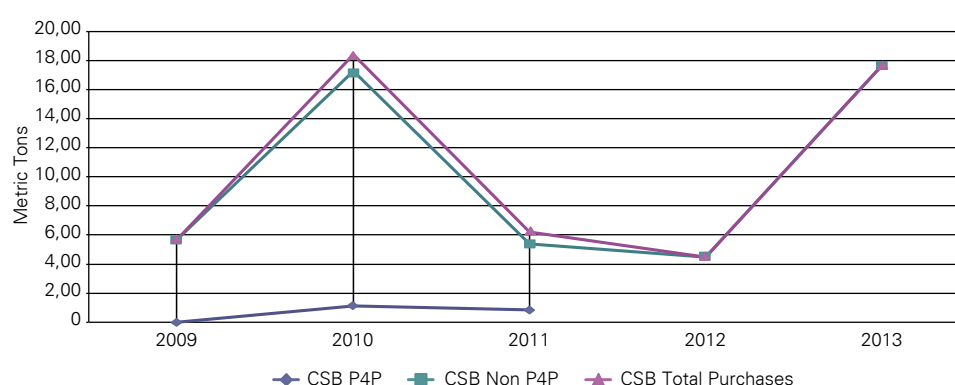
The trends for cereal and pulses peaked in 2011/12 as more purchases were made through the open BVO platform. It became the preferred method of procurement. The 2012/13 declining trends show that farmers did not consider the P4P programme as their main reference market. This was corroborated during field interviews. In

¹⁰ In the current WRS, receipt holders can get a loan of up to 70 percent of the value of the commodity, which enables them to buy inputs without having to wait to sell the commodity outright.

Table 3: Planned versus Actual Purchases in Tonnes

Year	Cereal Planned	Pulses Planned	CSB Planned	Total Planned P4P	Cereal Actual	Pulses Actual	CSB Actual	Total Actual P4P	Difference
2009	5 653	416	991	7 060	41	0	0	41	7 019
2010	6 211	407	991	7 609	9 028	1 485	1 107	11 621	-4 012
2011	6 832	448	991	8 271	3 437	734	858	5 029	3 242
2012	7 516	493	991	9 000	10 215	8 549	0	18 764	-9 764
2013	4 823	316	578	5 717	1 839	1 242	0	3 081	2 636
Total	31 035	2 080	4 542	37 657	24 561	12 010	1 965	38 535	-878

Source: Author's compilation from official purchasing data.

Graph 1: Trends of regular overall P4P purchases by WFP in Malawi**Cereal Purchases****Pulse Purchases****Corn-Soya Blend (CSB) Purchases**

Source: Author's compilation from official WFP purchasing data.

the Cheka FO (50 tonnes of unshelled groundnuts) and Kaso FO (15 tonnes of maize), the farmers had sold to large traders using the BVO platform.

Building FO capacity

P4P engaged farmers in training on a number of topics such as leadership and good governance; production and

productivity; basic business management; warehouse management skills; and post-harvest management. Overall, 25 818 FO members were trained during the pilot period, disaggregated by gender as follows: 14 210 male farmers and 11 608 female farmers. The investment cost in training was USD 0.17 million, which translates to approximately USD 6.6 per farmer.

Figure 1: Graduation Strategy¹³**Original graduation strategy****Graduation strategy 2012/13**

Since its inception, the P4P has tried to be flexible, incorporating lessons learned in its programming so as to adapt to the Malawi context. The programme started with 17 FOs from 2008 to 2011/12. When the programme expanded in 2012 the country office increased its support to FOs; currently, 30 FOs receive support.

In 2013, the country office carried out a complete profiling of the FOs and a classification based on the procurement categories, namely: (i) low/direct purchasing; (ii) medium/soft tender; and (iii) high/open competition – BVO.¹¹ The categories have evolved as the country office developed a graduation strategy for FOs based on the different procurement modalities.¹² The underlying principle of the graduation strategy is that the FOs move from less demanding procurement modalities to those that require a more advanced understanding of contractual obligations and increased internal capacity. The strategy is based on the assumption that experience at the different procurement levels leads to better understanding and confidence of the FOs, resulting in improved performance and reduced oversight requirements from WFP.

The WFP Malawi graduation strategy draft document notes that “while the graduation strategy is designed to move FOs from the introductory direct purchase to the BVO, at times, it has been strategically necessary to engage a ‘graduated’ FO in a direct purchase for the purposes of encouraging the diversification of their marketing or where it has been felt that a direct purchase would be more efficient in

guaranteeing immediate and cost efficient delivery for WFP’s pipeline.”

As summarized in Annex 2, 5 (17 percent) of the 30 WFP-assisted FOs successfully participated in the open BVO, namely Chandawe, Cheka, Mwandama, Kafulu and Bua Mutete, and could be considered to have graduated based on the WFP graduation strategy. An additional five (Mwanyamula, Chikwatula, Kaso, Chisemphere and Likasi) can be considered at the mid-point of their progression, having successfully participated in direct contracting and/or soft tendering but yet to graduate to the third stage. Some 66 percent of the FOs either had defaults and no sales to WFP or no contracts with WFP. Figure 1 describes the evolution of the graduation strategy.

The modified graduation strategy 2012/13 was adapted after the successful piloting of the purchase of 63 tonnes of cereals in 2011 from two FOs through the WRS. The characteristics of FO classification are described in the following paragraphs and the detailed classification is provided in Annex 2.

Most FOs are still rated as low to medium (14 and 11, respectively) and five are regarded as high capacity/more likely to sustain business-oriented operations. All 14 of the FOs categorized as low performing have not been able to have contracts with WFP. Five of the 11 FOs rated medium have not had contracts with WFP but have sold to other large traders, indicating that they have the capacity to aggregate, attract buyers and make sales without necessarily targeting WFP as their principle market. Two of the five FOs rated medium used the WRS to sell to the bigger traders, which means that they

11 Classification of Malawi P4P FOs by capacity level and a study of FO dynamics paper

12 FO graduation case study – P4P Malawi (draft) version, 11 May 2013

13 P4P Story Draft, January 2014

were able to successfully compete in an open BVO trading platform. Four of the five high capacity FOs have successfully competed in open BVO tenders to supply WFP, while the fifth has supplied to other traders using the WRS. In summary, 13 of 30 (43 percent) FOs supported by WFP have sold directly to WFP using one or all of the procurement methods described above.

The characteristics underlying the FOs classification have been summarized by WFP as follows:

Low capacity FOs (14 out of 30 FOs)

- Structural (e.g. no access to storage and inadequate warehouse management practices) and behavioural (e.g. lack of trust among members, unwillingness to take risks and inconsistent/opportunistic membership), which hinder their development;
- Weak leadership, not able to generate consensus and trust on the activities and strategies carried out by the organization resulting in the inability to invest in the process of selling to WFP in an aggregated manner;
- Negative past experiences that have undermined the trust in committee members (e.g. members aggregating commodity but not finding a buyer); Chisemphere FO aggregated 284 bags of soya for a trader but failed to agree on a price, leaving members unable to sell their soya;
- Frequent internal disagreements over pricing;
- No access to or poorly managed infrastructure or basic equipment (pallets and weighing scales) to improve productivity and quality; and
- Price-related side selling as main reason for defaulting.

These factors generally hinder the ability of the FO to act as a cohesive unit. Individual members may refuse to aggregate or withdraw their commodities, making it difficult for members to successfully meet WFP's quality standards and structured procedures. The members tend to sell to the local informal markets.

Medium capacity FOs (11 out of 30 FOs)

- Possible internal structural and behavioural issues similar to those of the low capacity FOs, but with mechanisms developed to overcome them;

- Better access to storage;
- Understanding of marketing dynamics and contractual obligations;
- Resource constraints that affect quantity and quality of product; members, for example, may have to rent an unsuitable storage facility that is not properly ventilated, affecting the quality of the commodity (Chikwatula cooperative had to rent storage facilities); and
- Active seeking of alternative markets, and positive experience in different markets determining positive or negative evolution (Mwanyamula's negative experience with losing 200 tonnes of soya bean practically paralysed the organization; leaders had identified a big trader who collected all the produce but never paid).

These FOs have had more positive experiences with selling in an aggregated and cohesive manner; however, they are still limited in the kinds of markets they can approach in terms of the procurement modality. They have yet to successfully compete on the open BVO platform. The main reasons for default are process-related side selling or quality issues.

High capacity FOs (5 out of 30 FOs)

- Strong membership consensus generated around a sound internal structure and effective communication system as well as clear leadership;
- Positive experience in procurement contributing to building trust among members;
- Possible need to develop more rigorous internal control procedures;
- Adequate access to infrastructure and equipment; and
- Possible use of advanced mechanisms of facilities such as commodity exchange or WRS in their trading.

These organizations are regularly trading beyond P4P, and WFP is considered one of many possible markets. The organization might be trading in other commodities apart from the core WFP commodities, like tobacco in Mwandama, and may be able to obtain higher margins for tobacco than for the WFP target crops, thus making it more attractive to sell the crop with more income. The FOs may have developed new structures, such as second level unions, and provide a variety of services to their members, such as inputs or access to credit. The main reasons for default are

management issues related to internal control mechanisms.

Promotion of the development of platforms for structured trade

The second strategic entry point for the Malawi P4P pilot programme is the **promotion of the development of platforms for structured trade** - the ACE platform.¹⁴ Grain trading in Malawi used to be done through the state-run marketing board, the Agricultural Development and Marketing Corporation (ADMARC). As of 2001, the Government mandated the National Food Reserve Agency (NFRA) to manage the strategic grain reserve instead of ADMARC.

NASFAM established ACE in 2004 with the intention of accessing better markets for its members. The exchange started operations in 2006, which initially were limited to price information sharing. Commodity exchanges are institutions that seek to facilitate and improve trade. They aim to decrease transactions costs, mitigate information asymmetries and govern contractual relations between market participants, with the overall goal of inducing efficiency gains. ACE's overall objective is to create an efficient and transparent marketing system for agricultural commodities, thereby reducing transaction costs and risks and linking small producers to markets.

The ACE system is based on three pillars: (i) facilitating access to higher-value output markets using a virtual trading platform that allows registered traders or brokers to place bids to buy or offers to sell that are in turn promoted via the Internet, email, mobile networks, newspapers and radio; (ii) WRS (see procurement section); and (iii) market information collection and dissemination – an integrated agricultural marketing information system (AMIS). ACE uses mobile technology to collect price information from rural areas and disseminate it to farmers, traders and others in the agricultural industry. Farmers and traders need to be well informed about price trends in order to make good marketing decisions. Crosscutting supporting components such as promotion, sensitization, arbitration and information technology management are also strategic to the model's holistic approach. Together these elements represent an ongoing process as the exchange grows and new services are offered.

P4P supported the ACE platform to try to increase smallholder participation in the market, which was monopolized by traders. The ACE managing director confirmed that WFP had been the catalyst for ACE's increased trading profile and continued existence. WFP signed a comprehensive Memorandum of Understanding with ACE to develop an alternative procurement mechanism – BVO – for WFP. WFP bought 79 percent and 89 percent of its purchases in 2011 and 2012,¹⁵ respectively, through the ACE platform. This translates to 63 percent and 84 percent of all trade through ACE in those years,¹⁶ making WFP the largest buyer on ACE.

14 Hernandez Valerie Morua (December 2012) "The Agricultural Commodity Exchange for Africa: Mapping the Progress of Structured Trade Systems in Malawi." <http://www.aceafrica.org/media/7618/The%20ACE%20Model%20Valeria%20Morua%20-%20Revised.pdf>

15 2012 was a poor harvest year for cereals and all cereal purchases were made through the ACE platform with no purchases made in the non-P4P programmes. This is mainly related to a strategic procurement decision rather than a result of harvest figures.

16 Figures do not include traded tonnages on warehouse receipts that remained in the warehouses.

P4P's overall costs (excluding procurement of goods) during the period up to the third quarter of 2013 were USD 2.8 million, which were spent on: personnel, travel, consultants, supplies, contracted services, subgrants to other organizations and FO supplies (Table 4). For the purpose of this analysis, these categories have been aggregated as follows:

- Recurrent costs
- Investment costs
- Contracted services
- Subgrants to other organizations and equipment costs

The total costs do not include any start-up costs used in developing the country implementation plan.

Recurrent costs account for USD 2.2 million (78 percent of total costs) and include staffing costs and country unit running costs (personnel, travel, consultants and supplies). P4P Malawi receives backstopping from WFP Rome whose costs are not shown in this analysis, as it was not possible to determine the amount of time provided. Personnel costs cannot strictly be seen as recurring costs given that a good share of the personnel resources are directed towards investing in enabling smallholder-friendly procurement modalities in the country.

Investment costs account for USD 0.6 million and include contracted service subgrants to other organizations and FO supplies.

Contracted services/training costs were estimated at USD 0.16 million for different types of training: warehouse management, post-harvest losses, business planning, marketing, gender and leadership skills. Some 25 818 FO members were trained at a unit cost of USD 6.3 per trainee. This was conducted through partners and contracted services. It was not possible to determine the number of farmers who delivered directly to WFP out of the total number trained. Thus this figure constitutes the number of farmers who received training for all initiatives.

Subgrants to other organizations and equipment. P4P established a broad series of partnerships with various stakeholders. A detailed breakdown of partners who have helped implement project activities is in Annex 3. Estimated partner contributions, which are significant as they include extension services, input supply purchases, capacity building and personnel, were not recorded or included in the analysis. The budget provided directly to partners from WFP is USD 0.4 million as subgrants to other organizations and USD 9 729 for equipment. The subgrants were provided to three main partners: ACE, Good Neighbours International and the Malawi Lake Basin Initiative. The ACE support was seemingly aimed at the development of the commodity exchange service, market price monitoring, a marketing consulting service for FOs, grain bulking centres and market information sharing services on mobile networks. Good Neighbours International provided input loans for income generation and food security, and capacity building to farmers on production techniques, the use of agricultural inputs, storage, quality control techniques, agricultural finance and improved marketing and commercialization. The Malawi Lake Basin Initiative trained farmers on post-harvest losses, marketing, value addition and warehouse construction, through support to WFP's home grown school feeding programme.

Procurement costs are readily available through P4P's purchase transaction records and are broken down by individual purchase order. As this is auditable financial data, the data are accurate and reliable. Aggregated records provide information on dates of order and purchase, commodity type, volumes and defaults. In this analysis, **procurement costs** are those costs directly related to commodity purchases. P4P Malawi concentrated its purchases on cereals (grain and maize meal), pulses and CSB. Tables 2 and 3 summarize the costs, unit prices per tonne and quantities purchased in the period under investigation for all WFP purchases. The costs in USD per tonne do not vary significantly for P4P and non-P4P purchases. The P4P purchases amount

Table 4: Total Project Costs up to Third Quarter 2013

Malawi funded by Bill and Melinda Gates Foundation	2009 to March 2010		Actual 2010	Actual 2011	Actual 2012	Actual 2013	Total to 3rd Quarter 2013	% Total Budget
Investment Costs								
Contracted services		32 320	4,873	37 222	44 088	45264	172 235	5%
Subgrants to other org.					149 553	271624	262 944	8%
FO supplies	38 781	827	1 064	1 683	6 155		77 562	2%
Subtotal investment costs	38 781	33 147	5 937	1 683	199 796	316 888	512 741	15%
Recurrent Costs								
Personnel	391 253	208 747	337 808	417 524	398 216	456 671	2 500 719	73%
Travel	27 239	-780	21 521	17 038	62 783	47 629	216 814	6%
Consultant				13 791	38 309	15 516	65 744	2%
Supplies	7 982	19 461	20 541	17 240	15 468	56 954	123 212	4%
Subtotal recurrent costs	426 474	227 428	379 870	465 593	514 776	576 770	2 906 489	85%
Total	465 255	260 575	385 807	467 276	714 572	893 658	3 419 230	100

Source: Malawi project staff.

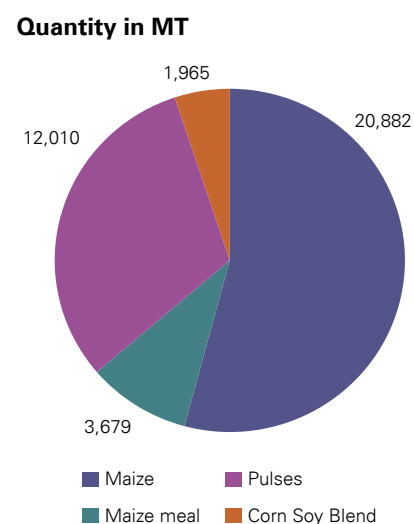
to USD 13.2 million for 38 535 tonnes of commodity purchases, representing 19 percent of all purchases made in Malawi for the WFP programme. This is significant as the P4P purchases represent purchases from nine FOs, or 30 percent of the FOs with whom WFP worked.

Figures 2 and 3 show the annual quantities purchased by total commodity (Figure 2) and by procurement method (Figure 3). The preferred procurement method is through the ACE platform, which represents 88 percent of all P4P purchases made – 80 percent through open BVO and 8 percent through selective BVO.

Generally, P4P adheres to the WFP procurement principle of cost-efficiency by ensuring that P4P purchases compare favourably to the cost of imported and local food. As Table 5 shows, the local prices for either direct purchasing or competitive bidding are consistently significantly lower than international prices (between 60 and 65 percent of international prices), making local purchases attractive.

Transportation costs. P4P used local transporters who were competitively sourced. Generally, transportation costs are a major challenge in Malawi given infrastructure conditions. Transportation costs from USD 9 to USD 20 per tonne for purchases near Blantyre and Lilongwe (less than a 200 km radius) where the WRS facilities are located. Further afield (above

a 200 km radius) transportation costs can reach USD 68 per tonne. Thus the FOs with greater success are those located closer to the Blantyre and Lilongwe storage facilities, while those further afield fail to compete once transportation costs are factored in, particularly when pricing is done for the BVO open tendering. Mwanamula FO, located in the north, has consistently lost bids because higher transportation costs make them less competitive. This is one of the reasons it is still regarded as a medium capacity FO.

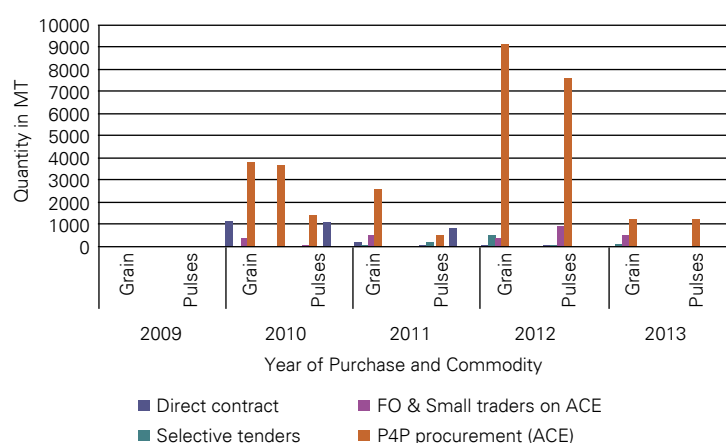
Figure 2: Total P4P Purchases by Commodity

Source: Author's compilation from official WFP procurement data.

Table 5: Maize Cereal Purchases Comparison of Mean Total International Price against Total Local Purchase Price in USD/MT

	Direct Purchase		Competitive Bidding	
	Total International Price USD/MT	Total Local Price USD/MT	Total International Price USD/MT	Total Local Price USD/MT
Count	11	11	14	14
Mean	415	271	447	272
Standard Deviation	55	100	124	103

Source: Author's compilation from official WFP Import Parity Comparison Data.

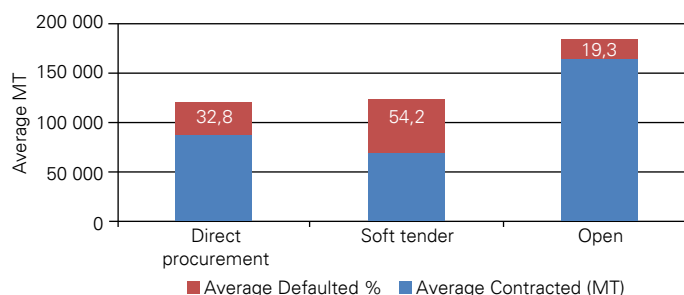
Figure 3: P4P Purchases by Commodity Year and Procurement Method

Source: Author's compilation from official WFP procurement data.

Defaults were problematic throughout the project. Most occurred because of WFP's comprehensive procurement procedures, which involve many steps such as tendering, approval, fumigation, superintendent inspection and uplifting. The default rate is significantly reduced once the FOs graduate to using the BVO platform. As demonstrated in Figure 4, the default rate for BVO is 19.3 percent compared with 54.2 percent for soft tendering. The highest operational cost for WFP and the least preferred and trusted method by the FOs is the soft tender, which has resulted in the highest defaults. The Graduation Strategy Case Study states that FOs referred to this modality as '*malonda a paka*', literally translated as '*con trade*', which figuratively means buying meat in a bag only to discover one's been sold a dead cat. FOs also see the soft tender procurement modality as problematic, as it involves a much longer delay in notification of the results due to procurement procedures. Experience has shown that soft tenders (whether "closed box" or selective BVO) produce little price variation and require a higher expenditure in terms of man-hours and equipment

than other procurement modalities. Since soft tenders such as the selective BVO are conducted on the open platform, the logistics involved in setting up the trade event, whether for equipment or getting farmers to a specific location, require more resources than any of the other modalities. The approval process may also be more rigid depending on the issues identified by the various committees or approving authorities.

Specific experiences representing significant defaults were reported for Kafulu FO (not interviewed during field visits), which defaulted with approximately 83 tonnes on a contract of 223 tonnes, using the WRS through the ACE platform. Kafulu has recovered and is now trading again, having invested in its leadership and organizational issues. Defaults generally occurred because of the extreme volatility of Malawi's grain market prices, resulting in side selling. If the price set for P4P contracts becomes unattractive to farmers at the time of sale, they may withdraw their maize from the warehouse or the common aggregation and resort to side selling, thus defaulting on contracts. In

Figure 4: Average Default Percentage by Modality

Source: Graduation Strategy Case Study.

2011, Cheka FO defaulted by 65 percent in a direct selling contract, only supplying 35 of the 110 tonnes of cereals. Members failed to aggregate because of pricing issues. Eighty percent of the nine FOs that successfully concluded contracts with WFP defaulted because of side selling. The main reasons for side selling were market pricing followed by WFP procurement procedures and quality issues.

A brief analysis of sales over time to those other than WFP still indicates farmers' preference for sales to large traders/processors. All FOs interviewed cited WFP's rigorous quality and grading system as being onerous. This may be one reason why the farmers prefer to sell to traders who are not as rigorous as WFP about maize quality. WFP has certainly raised farmers' awareness regarding the need for grading and the difference it can make to the FOs being awarded a WFP contract. It pays a premium to suppliers who provide Grade A commodities. It seems, however, there is sufficient demand from other players within the market, so WFP is not the farmers' first preference. This is demonstrated by the analysis of FOs showing that only 9 out of the 30 FOs successfully participated in WFP purchases. Mwandama and Kafulu have become regular WFP suppliers. Eight out of the nine FOs have participated in side selling, and all of the FOs primarily sell to traders of differing capacities.

P4P has also worked with small and medium traders providing training. In 2010, WFP launched the first call for small and medium traders in the roster, which ended up with ten small and medium traders registered. Some participated in the soft tender procedure in a bid to attract the participation of more small and medium traders. However, the costs of the soft tendering greatly outweigh the benefits, and increasing competition is happening on the ACE platform, which negates the need for a roster as the traders can compete on the open market.

This chapter describes the main benefits observed or reported during the key informant interviews and focus group discussions. The benefits are anecdotal and would need further exploration and study to extrapolate into more definitive direct and indirect benefits. Overall the project brought positive benefits to the smallholder farming community and resulted in the growth of ACE, as farmers recognized the value of the exchange.

Market Identification: The FOs gained access and exposure to several buyers at competitive prices through the ACE platform. The growth of the ACE platform can be directly attributed to the P4P programme, which represented 63 percent and 84 percent of all trade through ACE in 2011 and 2012, respectively. During the interviews it was determined that WFP was not the main procurement source for the FOs as indicated in Annex 2. Total procurement data for the 2013/14 season were not available. From interviews with the FOs, sales had gone to large buyers. Mwandama, for example, sold 19 tonnes of pigeon peas through ACE and approximately 145 tonnes of maize directly to a number of large traders, including Southern Poultry and Masamba Tobacco Estate, and through community sales.

Aggregation: The aggregation resulted in collective marketing, which resulted in higher profits for the farmers and economies of scale, and provided a source of input supplies (fertilizer and seed). Kaso FO was still holding 8 tonnes of cereals between ten members out of the total paid membership of 45, trying to capitalize on increased maize prices before the harvest. They had hoped to sell their maize within the two remaining weeks prior to harvest at a premium price. All FOs reported that the concept of collective bargaining was applied to all cash crops, even those that were not P4P. Cheka FO sold 50 tonnes of unshelled groundnuts at USD 300/kg during the 2012/13 season to a large trader. The selling price was on average 20 percent higher than prevailing market prices because Cheka had the groundnuts already

aggregated in one location and could negotiate for a better price. The buyer was identified through the ACE platform.

Diversified and growing businesses: The bulk sales resulted in some of the FOs growing their business enterprises into different cost centres. Mwandama's warehouse was recently certified for the WRS. They have a small trading store/supermarket and also run a grinding mill. Mwandama claimed that the collective sales of cereals and pulses through direct sales with WFP in 2010 acted as the capital base required to start other enterprises, which have been growing every year. It is difficult to fully attribute the 2010 sales as the sole cause of Mwandama's growth, as the FO is part of the Millennium Village Project, receiving assistance, including the purchase of inputs for the FO. Cheka FO established a milk processing unit as an alternative cost centre to the sale of cereals and pulses. Cheka also reported that direct sales through WFP had provided a source of capital. As in the case of Mwandama, Cheka was also assisted by World Vision. It is difficult to determine how much of the capital injection can be attributed to the P4P programme. Both FOs employ business managers and have diversified business interests centred on agricultural marketing. An indicative cash flow analysis for Mwandama is in Annex 4, which shows a detailed breakdown of the cost implications of the business model they chose to pursue.

Farming as a business: All the farmers interviewed now regard maize as a commercial crop and have adopted commercial farming practices to increase maize yields including: (i) using hybrid seed; (ii) applying fertilizer and, in some cases, herbicide; (iii) intercropping with beans and pigeon peas and rotating crops to reduce fertilizer use and restore soils; and (iv) improving seeding rates and spacing (*sasakawa*). The FOs interviewed (23 percent of all P4P-assisted FOs) could articulate the costs of production based on maize being regarded as a commercial crop. The Government or non-governmental

Table 6: Direct and Indirect Benefits

Direct Benefits	Indirect Benefits
Increased prices for Grade A commodities Market identification	Improved post-harvest handling practices
Collective marketing/aggregation	Broader market knowledge and information
Diversified and growing businesses	Increased household assets
Adoption of commercial farming practices	Increased productivity
Storage grading and improved grain quality	
Price negotiation and collective bargaining Increased knowledge (agricultural practices, marketing)	

organizations (NGOs) provided extension services as part of the partnership agreements. Indicative crop models were developed for five of the seven FOs visited to determine gross margins in the different regions using different agronomic practices. The FOs reported an increase in yields of between 20 and 50 percent based on improved crop husbandry. The Mwandama farmers who had intercropped with pigeon pea and beans and applied conservation agriculture practices achieved the 50-percent increase. An analysis of the gross margins achieved by the different farming methods shows that conservation agriculture with intercropping (Table 7) provides the greatest gross margins when compared with other farming methods.

Storage grading and improved grain quality: WFP, through P4P, provided the farmers with the standards required to become more competitive. Based on farmer interviews, farmers learned to fumigate and reduce post-harvest losses from 30 to 10 percent. Storage reduced the need to sell the grain immediately at harvest, enabling the farmers to fetch a better price in the lean season prior to the next harvest in March/April. The price differentials range from 40 Kwacha/kg (USD 0.08) at the beginning of the season to 160 Kwacha/kg (USD 0.35). The ability to store is also determined by the warehouse capacity. FOs with storage facilities ranging from 140 to 2 500 tonnes of capacity were the most successful as they were able to sell through open BVO and thus demonstrate their graduation. The importance of access to storage was one of the key factors for an FO to graduate as they also demonstrated a higher capacity to compete through the open BVO platform. WFP has provided financing for a storage facility, still under construction, through the Malawi Lake Basin Project. P4P also indirectly supported warehouse construction through its

partnership with ACE. Other facilities were built with funds from other organizations, including FAO and World Vision.

As one farmer at Mwandama said: "Trainings changed our mindset! We learned something new and are now open to learning more things. Now our maize is no longer just maize - we have very good quality grains". The training sessions repeated by most of the FOs included post-harvest and storage management training, specifically grading and leadership training.

Source: Field findings.

Price negotiation and collective bargaining: Prior to the P4P programme, farmers sold at farmgate to vendors who determined the price. They were mostly price takers. Since P4P, the farmers interviewed claimed they were able to determine and negotiate prices better as they had access to real time price information through AMIS. Any farmer registered in the system can receive price updates by text message.

Training and exposure: All the FOs interviewed appreciated the knowledge acquired and exposure through exchange visits. The manager of Mwandama said it was one of the ways in which the farmers were able to change mindsets, agree to aggregate and fumigate their produce and become more open to taking additional risks such as making investments in additional business cost centres like a grinding mill.

The farmers claimed that thanks to the knowledge gained through P4P, specifically on grading and quality improvement, aggregation, storage and reduction of post-harvest losses by fumigating, they managed to improve their asset bases. Through improved selling practices, the

farmers were able to: (i) buy livestock (large and small stock) and agricultural inputs; (ii) improve accommodation from thatch to metal roofs and concrete buildings; (iii) buy equipment, bicycles, motorcycles and pick-up trucks; (iv) buy land and buildings; (v) improve household nutrition by diversifying diets; and (vi) invest in their children's education/school fees. This is all circumstantial evidence that would require more detailed study. It is impossible to determine that the scale of the increase in disposable income to purchase assets could be directly attributed to the P4P programme.

Indirect P4P Benefits

In addition to the specific benefits, which the interviewees attributed to the pilot, P4P activities contributed to the following:

- P4P activities were catalysts for change in enabling smallholder farmers to compete in the maize grain marketing landscape, having changed the way in which farmers viewed grain. Prior to the P4P's stringent quality and grading standards, farmers viewed all grain as equally marketable. They did not select, grade and fumigate. Thus WFP's quality standards forced smallholder farmers to improve their post-harvest handling practices and the quality of the commodity sold.

- The investment into the ACE platform helped to provide farmers with access to price, buyer and seller information and to compete with a number of market actors. The farmers can now place their bid volumes and prices on the platform and sell directly to various players within the market, thus helping to further liberalise the market.
- The enabling environment provided by the Government through reduced state intervention in commodity trading was evidenced by the use of the ACE platform in 2013 to replenish the strategic grain reserve. Through this partnership between the NFRA and ACE, 27 000 tonnes were purchased from different sources, including small and medium traders and FOs, some of which were P4P-registered FOs (unable to verify the data from FO records).
- The investment in improved storage facilities through partner organizations enabled farmers to take advantage of higher prices during the lean months and not be forced to sell all their crops during the harvesting period.

No one factor is more important than the other because the confluence of these events managed to change the landscape of smallholder grain marketing within the overall landscape.

Table 7: Gross Margin Analysis at Harvest and Peak Selling Periods

Gross Margin in Malawi Kwacha	At Harvest	Peak Period
Chikwatula FO	-39 260	169 740
Chisemphere FO	-103 313	34 688
Mwanyamula FO – located in the north of the country	-77 274	47 726
Kaso FO - herbicide application	-90 500	129 500
Mwandama FO - conservation agriculture intercropping	35 890	443 390

Source: Author's compilation from field interviews.

This chapter develops some financial models to provide further insight into the P4P benefits and sustainability.

The objective is to provide a practical means to assess the profitability and benefits for farmers of the P4P activities and procurement. As the analysis is ex-post and data were not originally collected for this purpose, no attempt has been made to calculate the internal rate of return and the net present value of the supported activities.

Five FOs were asked to describe their farming practices and a gross margin analysis was made to determine whether the application of aggregation and storage had any significant impact on the farmers. The improved agronomic practices cannot be directly attributed to the P4P project because the programme did not directly invest in training farmers in this area. The P4P programme, however, can be directly credited with training in post-harvest management, fumigation and storage. Thus analysing the financial returns of farmers selling at harvest versus the financial returns of farmers selling after storage can provide some insight into the gains farmers made from the P4P pilot programme.

The gross margin analysis compared the inputs, both labour and non-labour, and farming practices used by five of the seven FOs interviewed. The gross margin was used to compare the sales price at harvest versus those at the peak period in order to determine whether there were any significant gains in investing in storage and

fumigation. The prices are expressed in Malawi Kwacha.

As the summary in Table 7 (detailed tables in Annex 5) illustrates, the price differential between the harvest and peak periods made a significant difference. For four out of the five FOs not practicing conservation agriculture, losses were recorded at harvest had they chosen to sell at that time. The analysis also seems to show that improved agronomic practices using conservation agriculture and zero tillage, as applied by Mwandama, result in positive gross margins at harvest and peak periods, providing farmers with a financial return.

This country case study indicates that overall P4P brought positive benefits to the smallholder farming community and resulted in the growth of ACE, as farmers recognized the value of the exchange. It should be noted that the P4P programme only targeted approximately 2 percent of Malawi's agricultural producers, thus any discourse in this paper should be seen in light of the limited scope and size of the pilot. Further to this, the mission only visited 7 of the 30 WFP-affiliated FOs and two traders. Thus the findings are by no means representative of the total population that benefited from the P4P programme.

FO development and graduation: Most of the challenges that still exist within the FOs of low (14) and medium (11) capacity are related to issues of trust and risk.

The trust issues resulted in defaults during regular tendering, which are fairly common (Figure 4). The Kafulu FO defaulted with approximately 83 tonnes on a contract of 223 tonnes, using the WRS through the ACE platform. Kafulu has since recovered and is now trading again, having invested in its leadership and organizational issues. Defaults occurred because of the extreme volatility of the Malawi grain market, resulting in side selling. The price set for P4P contracts may become less attractive to the farmers at the time of sale, leading them to withdraw their maize from the warehouse. Eighty percent of the ten FOs that successfully concluded contracts with WFP defaulted because of side selling. The main reasons for side selling were market pricing, followed by WFP procurement procedures and quality issues.

In terms of the risk factors, distances from main markets (of a radius greater than 200 km from Blantyre or Lilongwe) and high transportation costs and lack of overall economies of scale make FOs located farther away from Lilongwe and Blantyre less competitive. This is a shared problem in the transportation and agriculture sectors. They were not as successful in the open tendering arena. The five most

successful FOs were within 100 km of Blantyre or Lilongwe. The Mwandama warehouse received accreditation for the WRS. The FOs that lack storage facilities are further disadvantaged as they have to rent warehouses, making them less competitive. Chikwatula quoted monthly warehouse rentals of between 15 000 and 20 000 Kwacha (approximately USD 48/month) for a facility of 2 tonnes of capacity. Thus the issue of FO graduation still remains and requires further investment in capacity building, specifically on contract management and trust in the WRS. In recorded incidents some farmers experienced significant losses: an unscrupulous trader disappeared after collecting the stock, which was never recovered (see analysis of low capacity FOs – negative past experiences).

Capturing costs: The costs reflected in this analysis only provide some of the costs recorded by WFP at country level. It does not fully capture the total cost of the programme per country, including the start-up costs and costs of partner investments. The more successful FOs received substantial inputs from other NGOs and partnerships, the most notable being the Millennium Village Project for Mwandama and the World Vision-supported Cheka Integrated Agriculture/Aquaculture Cooperative Society. The additional costs of extension, capacity building and equipment/inputs would need to be taken into account when doing a detailed cost-benefit analysis to truly determine the realistic cost of investing in an FO from start-up to self-sufficiency.

Record-keeping: The Malawi programme invested in significant knowledge management in terms of case studies and recording FO stories. The WFP M&E system captured sale volumes and values comprehensively, but did not capture the costs of partnering as described above. Only two of the seven FOs interviewed could produce reports for sales figures. Verification of the process, WFP records or sales to ACE were rendered impossible and the mission had to rely on word of mouth

for estimates of the commodities sold (see limits to the study in the introduction). In order to scale up such an initiative, verifiable records from all parties should be available in order to perform a full cost-benefit analysis.

Sustainability: A key element of programme sustainability is access to markets other than WFP. Field findings have shown a trend and capacity of farmers to gain access to other markets through the ACE platform and side selling within their immediate communities. The availability of produce in a single location with similar standards is key to attracting commercial buyers who cannot afford the transaction costs of dealing with many small producers and/or are not interested in hiring middlemen to aggregate on their behalf. However, the issues with side selling, resulting in up to 80 percent default rates of the nine FOs that had successfully concluded contracts with WFP, indicate there is still work to be done in developing the FOs into viable market entities that can aggregate and jointly sell.

Cost per benefiting farmer: Assuming that the beneficiaries trained were the direct recipients of P4P investments, the overall P4P intervention investment cost per beneficiary was estimated at USD 107 (total project cost of USD 2.8 million for Malawi divided by 25 818 trained beneficiaries), excluding procurement costs.

Annex

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LIST OF PERSONS MET

Ms. Coco Ushiyama	WFP Country Director and Representative
Ms. Florence Rolle	FAO Representative
Mr. J. Luhanga	Permanent Secretary Agriculture
Mr. Baton Osmani	Deputy Country Director
Mr. Kristian Schach Møller	Agricultural Commodity Exchange (ACE)
Mr. F. Chikhwaya - Treasurer Mr. E. Mbonongo - Chairman Mr. E. Billy - Member Ms. P. Chogadama - Member	Kaso Producers & Marketing Cooperative Society
Mr. P. Sakwiza - Cooperative Manager	Cheka Integrated Agriculture/Aquaculture Cooperative Society
Mr. A. Msefula Alfred- Chairperson Ms. R. Kaphadzale - Committee Member Mr. Ngomazulu - Committee Member Mr. A. Moveti - Committee Member Mr. A. Nowa - Secretary Mr. A. Chimse	Chikwatula Macadamia Cooperative Society
Mrs. Mercy Ching'amba	Ministry of Agriculture and Food Security Extensionist worked with Chikwatula FO
Ms. E. Ngoma - Chairperson Mr. C. Mazibuko - Secretary Mr. G. Mwale - Committee Member Mr. F. Phiri - Committee Member	Chisemphere Farmers Association
Mr. B. Kaunga - Warehouse Manager Mr. Mambo - Chairman Mr. Matenganya – Committee Member Mr. F. Chiesa – Committee Member Mr. Ntapasha - Secretary Ms. Chikanguya – Committee Member Mr. Nazombe - Treasurer Ms. G. Hona – Committee Member Mr. B. Katsonga – Ex-chairman	Mwandama Grain Club
Margret Mukhota – Small Trader	Alema Trading
Mr. Bintoni - Chairperson Ms. Chabzyinda - Member Ms. Tanyaze - Member Ms. Z. Chingapa - Member Mr. P. Malanga – Member	Upper Masasa Association
Mr. Alexander Chikapula	NASFAM
Mr. Mutonga - Secretary Ms. Nkosi Judith - Chair Lady Ms. L. Nyirenda - Treasurer Mr. J. Nyirenda - Member Mr. B. Gumbo - Member	Manyamula Farmers Association
Mr. Dimitri Giannakis – Managing Director	Farmers World

Annex

2

DETAILED FARMER ORGANIZATION CLASSIFICATION

FO	Procurement modality	Markets beyond WFP	Reasons for default	Membership/ trust issues	Access to storage	Warehouse management	Strategic thinking	Capacity
Bwengu	No contract	Community/individual sales to small vendors	No contracts	No	Yes (rented/owned)	Yes (not effective)	Planning (but unclear/unrealistic)	Low
Chigonothi	No contract	Community/individual sales to small vendors	No contracts	Yes (could overcome)	Yes (rented/owned)	Yes (effective)	Planning (and following up)	Low
Chilitudwa	No contract	Community/individual sales to small vendors	No contracts	No	No	None	Planning (and following up)	Low
Chiwoza	No experience/negative experience with DC	Community/individual sales to small vendors	No contracts	Yes (could overcome)	Yes (rented/owned)	Yes (not effective)	Planning (but unclear/unrealistic)	Low
Hanyezi	No experience/negative experience with DC	Community/individual sales to small vendors	No contracts	Yes (could not overcome)	Yes (rented/owned)	None	No planning	Low
Kampini	No contract	Small/medium traders	No contracts	No	Yes (rented/owned)	N/A	Planning (but unclear/unrealistic)	Low
Kapululu	No experience/negative experience with DC	Community/individual sales to small vendors	Side selling (due to market price fluctuation)	Yes (could overcome)	Yes (rented/owned)	None	Planning and following up	Low
Kasiya	No experience/negative experience with DC	Community/individual sales to small vendors	Side selling (due to market price fluctuation)	Yes (could not overcome)	Yes (rented/owned)	None	No planning	Low
Malembo	No contract	Small/medium traders	No contracts	No	No	None	No planning	Low
Mgwirizano	No experience/negative experience with DC	Medium and big traders/ Warehouse Receipt System	Side selling (due to market price fluctuation)	No	No	None	Planning (but unclear/unrealistic)	Low
Mtapo	No contract	Community/individual sales to small vendors	No contract	No	Yes (rented/owned)	Yes (not effective)	Planning (and following up)	Low
Nankumba	No contract	Small/medium traders	No contract	Yes (could not overcome)	No	None	Planning (but unclear/unrealistic)	Low
Tiyanjane	No experience/negative experience with DC	Small/medium traders	Side selling (due to market price fluctuation)	Yes (could not overcome)	Yes (rented/owned)	None	No planning	Low
Upper Masasa	No contract	Community/individual sales to small vendors	No contract	Yes (could not overcome)	Yes (rented/owned)	None	No planning	Low
Bua Mtete	Experience with DC, soft tendering and/or open BVO (Bid Volume Only)	Small/medium traders	Side selling (due to issues with WFP's procurement procedures) or Q&Q issues	Yes (could overcome)	Owned	Yes (not effective)	Planning (but unclear/unrealistic)	Medium
Chibwelera	No contract	Medium and big traders/ Warehouse Receipt System	No contract	No	No	None	Planning (and following up)	Medium
Chikwatula	Positive experience with DC, contracting and soft tendering	Small/medium traders	Side selling (due to issues with WFP's procurement procedures) or Q&Q issues	No	No	None	Planning (but unclear/unrealistic)	Medium

FO	Procurement modality	Markets beyond WFP	Reasons for default	Membership/ trust issues	Access to storage	Warehouse management	Strategic thinking	Capacity
Chikweo	No contract	Medium and big traders/ Warehouse Receipt System	No contract	No	Rented	None	Planning (but unclear/ unrealistic)	Medium
Chilanga	No contract	Community/individual sales to small vendors	No contract	No	Rented	None	Planning (and following up)	Medium
Chisemphe	Positive experience with DC, contracting and soft tendering	Community/individual sales to small vendors	Side selling (due to market price fluctuation)	No	Yes (rented/ owned)	Yes (not effective)	Planning (but unclear/ unrealistic)	Medium
Kaso	Positive experience with DC, contracting and soft tendering	Small/medium traders	Side selling (due to market price fluctuation)	Yes (could overcome)	Yes (rented/ owned)	Yes (effective)	Planning (but unclear/ unrealistic)	Medium
Likasi	Positive experience with DC, contracting and soft tendering	Small/medium traders	Side selling (due to issues with WFP's procurement procedures) or Q&Q issues	No	Yes (rented/ owned)	None	Planning (and following up)	Medium
Mando	No contract	Small/medium traders	No contract	No	Yes (rented/ owned)	None	Planning (and following up)	Medium
Manyamula	Positive experience with DC, contracting and soft tendering	Small/medium traders	Side selling (due to market price fluctuation)	Yes (could not overcome)	Yes (rented/ owned)	Yes (not effective)	Planning (but unclear/ unrealistic)	Medium
Mdeka	No contract	Small/medium traders	No contract	No	Yes (rented/ owned)	N/A	Planning (and following up)	Medium
Bowe	No contract	Medium and big traders/ Warehouse Receipt System	No contract	No	Yes (rented/ owned)	Yes (effective)	Planning (and following up)	High
Chandawe	Experience with DC, soft tendering and/or open BVO (Bid Volume Only)	Small/medium traders	Side selling (due to market price fluctuation)	Yes (could overcome)	Yes (rented/ owned)	Yes (effective)	Planning (and following up)	High
Cheka	Experience with DC, soft tendering and/or open BVO (Bid Volume Only)	Medium and big traders/ Warehouse Receipt System	Side selling (due to issues with WFP's procurement procedures) or Q&Q issues	No	Owned	Yes (effective)	Planning (and following up)	High
Kafulu	Experience with DC, soft tendering and/or open BVO (Bid Volume Only)	Medium and big traders/ Warehouse Receipt System	Management issues (fraud, lack of internal control)	Yes (could overcome)	Yes (rented/ owned)	Yes (effective)	Planning (and following up)	High
Mwandame	Experience with DC, soft tendering and/or open BVO (Bid Volume Only)	Medium and big traders/ Warehouse Receipt System	Management issues (fraud, lack of internal control)	Yes (could overcome)	Yes (rented/ owned)	Yes (effective)	Planning (and following up)	High

Annex

3

PARTNERSHIP AGREEMENT STATUS

Country	Quarter	Year	Partner Category	Partner Name	Type of Support Provided	Detail Support Provided	District/ Location	Signed Agreement	Start Date	End Date	Receives Funds	Partnership Status	Remarks
Malawi	October - December	2010	Government Agency	Agro-Economic Survey (AES)	Agribusiness Management	Market price monitoring. MoU signed with AES (Agro-Economic Survey) Department of the Min. of Agriculture, to collect wholesale & retail price data of maize & beans in 20 selected markets in P4P districts, with USDA funding	Lilongwe (HQ) and enumerators in all districts	Yes	01/08/2010	31/12/2013	No	Ongoing	WFP purchases on behalf of partner for the sake of efficiency.
Malawi	October - December	2010	International NGO	Concern Universal	FOs Institutional Capacity Building	Exact support under P4P to be determined; however Concern supports FOs through capacity-building (strengthening of FO and its processes) and marketing/commercialization support	Dedza and Ntcheu	No			No	Suspended	While Concern has participated in the lessons learned workshop, P4P FOs are no longer supported by Concern as geographic focus shifted slightly.
Malawi	April - June	2010	International NGO	Catholic Relief Services (CRS)	Agribusiness Management	Collaboration on LRP proposals for USDA	Lilongwe, Kasungu	No			No	Suspended	Discussions were renewed to gauge potential collaboration for LRP proposals requested by USDA. However, for the time being CRS has decided not to submit a proposal.
Malawi	October - December	2012	International NGO	Development from People to People (DAPP)	Production & Productivity	Capacity building in production technology. Promised to submit FO assessment forms for DAPP supported FOs	Lilongwe	No			No	Under Negotiation	After silence and perceived lack of interest, DAPP renewed their interest and promised to submit FO assessment forms for DAPP supported FOs. DAPP is also a grantee of USDA.
Malawi	July - September	2011	International NGO	Farm Voice Radio (FVR)	Production & Productivity	Radio programming and dissemination of info on agricultural production and marketing	Zomba (HQ) but broadcasting throughout the country	No			No	Suspended	Participation in National Radio Agricultural Agenda Committee and discussion of themes to cover
Malawi	July - September	2011	Other	Financial inclusion in Malawi (FIMA)	Other	TBC	TBC	No			No	Suspended	With FIMA/UNCDF only initial discussions took place to gauge potential support to the WRS in Malawi, but it never kicked off in terms of an MoU and agreement etc. The presumption was that one of the reasons was that banks, OIBM in particular, were already very interested in supporting/ prefunding the WRS through ACE.

Country	Quarter	Year	Partner Category	Partner Name	Type of Support Provided	Detail Support Provided	District/ Location	Signed Agreement	Start Date	End Date	Receives Funds	Partnership Status	Remarks
Malawi	July - September	2011	Private sector	General Mills (GMI)	Agro-Processing	Research on how to prolong shelflife of corn-soya blend (CSB) to large- and small-scale processors, HAACP training	America	Yes			No	Completed	GMI has ventured into simulation of CSB production including toasting post extrusion and provision of antioxidants. Food technologists need to be more involved in discussions, particularly as results of simulation come out. Mission of GMI to Malawi planned for early 2011
Malawi	October - December	2012	Government Agency	USAID	Production & Productivity	Training of farmers (crop conditioning), grain bulking centres, MIS	Lilongwe, Ntchisi, Zomba, TBC	No			No	Ongoing	Warehouses upgrading rendered for 2 FOs, crop conditioning ToT conducted for WFP/partner staff, business planning consultation conducted for 4 FOs. In 2012, farmer field days conducted for selected FOs - in 2013 planned to expand activities for more farmers. MLI is also complementing the Africa Commodity Exchange in Malawi.
Malawi	July - September	2011	Local NGO	Mizuzu Catholic Development Commission in Malawi (CADECOM)	Other	TBC	Mzimba	No			No	Suspended	Support to P4P has to be determined; however, they are supporting the FOs in terms of capacity building (called technical support by CADECOM); meeting supposed to be happening in Dec. 2010, failed due to other commitments.
Malawi	January - March	2011	Finance Institution/ Bank	Opportunity Bank International Bank (OIBM)	Other	TBC	Dowa, Zomba, Salima	No			No	Suspended	With a contract signed with Kafulu, P4P has broadened its geographical coverage. Formal agreements with OIBM will not be signed according to the discussion during the workshop in Addis. However, OIBM has also broadened their FO coverage and is in detailed discussion with another P4P supported FO, i.e. Chikwatula; OIBM participated at the AR in Maputo and is very interested in financing emerging warehouse receipt system.

Country	Quarter	Year	Partner Category	Partner Name	Type of Support Provided	Detail Support Provided	District/ Location	Signed Agreement	Start Date	End Date	Receives Funds	Partnership Status	Remarks
Malawi	July - September	2010	UN Agency	United Nations Capital Development Fund (UNCDF)	Credit & Finance	FIMA is financed by UNCDF, UNDP, Cordaid and Malawi Govt- inventory credit through savings clubs or development of a tool and support to WRS (tbc)	TBC	No			No	Suspended	With FIMA/UNCDF only initial discussions took place to gauge potential support to the WRS in Malawi, but it never kicked off in terms of an MOU and agreement etc. The presumption was that one of the reasons was that banks, OIBM in particular, were already very interested in supporting/ prefunding the WRS through ACE.
Malawi	January - March	2011	UN Agency	UNDP/MVP	Production & Productivity	Farm inputs and business process support	Mchinji/ Zomba	No			No	Ongoing	A joint action plan has been finalized and submitted to respective headquarters. This is, however, not an MoU for specific supply side support. Normal collaboration such as contracts with FOs, and exploring the use of WRS by WFP, will continue. Mwandama FO will receive support from MLI.
Malawi	October - December	2012	International NGO	World Vision International (WVI)	Other	TBC	Mzimba, Ntchisi and Mchinji	No			No	Suspended	After lack of response, the ongoing discussions to prepare an agreement are suspended.
Malawi	April - June	2012	UN Agency	FAO	Post-harvest Handling	Warehouse construction and grain bank training	Dowa	No			No	Ongoing	Kaso FO was supported by the FAO project on grain bank. FAO will likely extend the project and seek to target P4P FOs in other areas of the country.
Malawi	October - December	2012	Government Agency	Ministry of Agriculture	Agribusiness Management		Mangochi	No			No	Under Negotiation	Pending negotiation for an agreement related to supply support for the pilot of home grown school feeding.
Malawi	October - December	2012	Private sector	Agricultural Commodity Exchange (ACE)	Agribusiness Management	Commodity exchange service, market price monitoring, marketing consulting service for FOs	Lilongwe (HQ), trade desks in 17 P4P markets plus other 9 markets	Yes	01/04/2012	31/03/2013	Yes	Ongoing	ACE keeps accommodating WFP's BVOs for free of charge. A comprehensive MoU was put into effect from 2010 to early 2011, but the same terms are now included in individual agreements which are signed for individual BVOs. A new partnership is being developed with ACE and MLI incorporating market price collection and marketing support service for P4P FOs. Extension in time and inclusion of construction /furbishing of warehouse facilities for WRS in rural areas pending discussion.

Country	Quarter	Year	Partner Category	Partner Name	Type of Support Provided	Detail Support Provided	District/ Location	Signed Agreement	Start Date	End Date	Receives Funds	Partnership Status	Remarks
Malawi	October - December	2012	International NGO	Good Neighbors International	Production & Productivity	Training of Farmers (crop conditioning and storage management), grain bulking centres, MIS, market information sharing on mobile network	Lilongwe	Yes	01/01/2013	31/12/2013	Yes	Ongoing	Implementation to start in 2013
Malawi	October - December	2012	International NGO	Malawi Lake Basin Programme	Production & Productivity	Training of farmers, post-harvest losses, marketing, value addition	Mangochi and Salima	No	01/01/2013	31/12/2013	Yes	Under Negotiation	Detailed discussions to be held in January 2013. Related to P4P and HGFSF activities.
Malawi	October - December	2012	Research Institution/ Academics	Auburn University	Post-harvest Handling	Supporting establishment of equipment for post-harvest losses reduction - in connection with clean sustainable energy at local level	TBD	No			No	Under Negotiation	Joint proposal to be submitted to USAID end of January 2013. Project duration, five years

Annex

4

MWANDAMA GRAIN BANK CASH
FLOW STATEMENT 2013

	June	July	August	September	October	November	December	January	February	March	April	May	Totals
INFLOWS													
Balance b/f	-	978.500	374.334	25.168	495.002	6.282.836	14.096.670	19.852.004	24.352.338	28.568.672	32.412.006	30.415.340	30.415.340
Debtors	150.000	150.000	-	-	-	-	-	180.000	200.000	200.000	200.000	200.000	300.000
Maize mill	-	-	160.000	160.000	160.000	160.000	160.000	180.000	200.000	200.000	200.000	200.000	1.780.000
Interest from the bank	-	-	-	-	-	-	-	-	-	-	-	-	-
Motor vehicle	89.000	90.000	90.000	90.000	100.000	100.000	120.000	120.000	120.000	300.000	300.000	300.000	1.819.000
COMMODITY SALES													
Soya beans 250 bags at 250 per kg	-	-	625.000	625.000	625.000	625.000	625.000	-	-	-	-	-	3.125.000
Maize sales 15 000 at 60 per kg	6.900.000	3.000.000	6.000.000	-	4.000.000	7.200.000	7.200.000	7.200.000	7.200.000	7.200.000	-	-	55.900.000
Pigeon peas 1 000 bags at 140	-	-	1.750.000	1.750.000	1.750.000	1.750.000	1.750.000	-	-	-	-	-	7.000.000
Total inflows	7.139.000	4.218.500	7.249.334	2.650.168	7.130.002	16.117.836	23.951.670	27.352.004	31.872.338	36.268.672	32.912.006	30.915.340	100.339.340
OUTFLOWS													
PURCHASE PER GRAINS													
Pigeon peas 1 000 bags at 100 per kg	-	-	5.000.000	-	-	-	-	-	-	-	-	-	5.000.000
Soya beans 250 at 150 per kg	-	1.875.000	-	-	-	-	-	-	-	-	-	-	1.875.000
CAPITAL INVESTMENT													
Maize mill	750.000	-	-	-	-	-	-	-	-	-	-	-	750.000
Building	120.000	-	-	-	-	-	-	-	-	-	-	-	120.000
Electricity	-	-	25.000	25.000	25.000	25.000	25.000	25.000	25.000	25.000	25.000	25.000	250.000
Others	-	-	-	-	-	-	-	-	-	-	-	-	-
Service	-	-	-	15.000	15.000	15.000	15.000	15.000	15.000	15.000	15.000	15.000	135.000
Grocery building and fittings	-	-	-	-	-	-	-	-	-	-	-	-	-
Fridge	-	200.000	-	-	-	-	-	-	-	-	-	-	200.000
Grocery starters	-	-	1.500.000	-	-	-	-	-	-	-	-	-	1.500.000
Electricity	-	-	25.000	25.000	25.000	25.000	2.500	2.500	2.500	2.500	2.500	2.500	90.000
MAIZE COLLECTION													
Pre-warehouse treatment	18.000	-	-	-	-	-	-	-	-	-	-	-	18.000
Transport hire maize collection	-	1.000.000	-	-	-	-	-	-	-	-	-	-	3.000.000
Empty sacks	1.000.000	-	-	-	-	-	-	-	-	-	-	-	1.000.000
Labour	700.000	-	-	-	-	-	-	-	-	-	-	-	700.000
Ulisi	110.000	-	-	-	-	-	-	-	-	-	-	-	110.000
Ziosongole	1.000	-	-	-	-	-	-	-	-	-	-	-	1.000
Scales	320.000	-	-	-	-	-	-	-	-	-	-	-	320.000
Food	145.000	-	-	-	-	-	-	-	-	-	-	-	145.000

	June	July	August	September	October	November	December	January	February	March	April	May	Totals
ADMINISTRATIVE COSTS													
Salaries and Wages of Personnel	288.500	288.500	288.500	288.500	288.500	288.500	288.500	288.500	288.500	288.500	288.500	288.500	3.462.000
Mr Mwandama	25.000	25.000	25.000	25.000	25.000	25.000	25.000	25.000	25.000	25.000	25.000	25.000	300.000
Board allowances	135.000	135.000	135.000	135.000	135.000	135.000	135.000	135.000	135.000	135.000	135.000	135.000	1.620.000
Leave grants	-	-	-	-	-	-	-	-	-	-	-	142.600	142.600
Airtime	7.000	7.000	7.000	7.000	7.000	7.000	7.000	7.000	7.000	7.000	7.000	7.000	84.000
Fuel	300.000	91.666	91.666	91.666	91.666	91.666	91.666	91.666	91.666	91.666	91.666	91.666	1.308.326
Secretariat travel	-	-	-	-	-	-	-	-	-	-	-	-	-
Meetings	10.000	-	-	-	-	10.000	-	-	10.000	-	-	10.000	40.000
Communications	14.000	14.000	14.000	14.000	14.000	14.000	14.000	14.000	14.000	14.000	14.000	14.000	168.000
Trainings	-	420.000	-	-	-	-	-	-	-	-	-	-	420.000
Stationary	18.000	18.000	18.000	18.000	18.000	18.000	18.000	18.000	18.000	18.000	18.000	18.000	216.000
Allowances for meetings with chiefs and t/a	-	-	-	-	44.000	44.000	-	-	44.000	-	-	-	88.000
Electricity	10.000	10.000	10.000	10.000	10.000	10.000	10.000	10.000	10.000	10.000	10.000	10.000	120.000
Visit	-	-	-	-	-	-	-	-	-	-	-	700.000	700.000
Loading and offloading labour	-	-	1.000	1.000	1.000	3.000	3.000	3.000	3.000	300.000	-	-	314.000
Transport	-	-	-	-	5.000	5.000	5.000	5.000	5.000	5.000	5.000	5.000	40.000
FIXED ASSETS AND MAINTENANCE													
Computer and accessories	-	980.000	-	-	-	-	-	-	-	-	-	-	980.000
Purchase of land	110.000	-	-	-	-	-	-	-	-	-	-	-	110.000
Furniture	-	-	-	-	-	-	-	-	250.000	-	-	-	250.000
Toilets	-	-	-	-	-	-	-	-	-	400.000	-	-	400.000
Warehouse maintenance	-	-	-	-	500.000	500.000	500.000	500.000	500.000	500.000	-	-	2.500.000
Bicycles	-	-	-	-	-	245.000	-	-	-	-	-	-	245.000
Kitchen	-	-	-	-	-	-	-	-	-	-	-	150.000	150.000
Service	25.000	-	-	25.000	25.000	25.000	25.000	25.000	25.000	25.000	25.000	25.000	225.000
Insurance and other	29.000	-	-	-	-	-	1.100.000	-	50.000	-	-	-	79.000
Tyres	-	380.000	-	-	162.000	35.000	35.000	35.000	35.000	145.000	35.000	35.000	1.100.000
Vehicle maintenance	35.000	-	-	-	162.000	35.000	35.000	35.000	35.000	145.000	35.000	35.000	932.000
Total outflows	6.160.500	3.844.166	7.224.166	2.155.166	847.166	1.021.166	2.299.666	1.199.666	1.503.666	2.056.666	696.666	2.199.266	31.207.926
NET BALANCE	978.500	374.334	25.168	495.002	6.282.836	15.096.670	21.652.004	26.152.338	30.368.672	34.212.006	32.215.340	28.716.074	69.131.414

Annex

5

CROP BUDGET PER FARMER
ORGANIZATION INTERVIEWED

Maize - Chisemphere						
Per Acre in Malawi Kwacha						
Description	Unit	A Quantity	B Unit Cost at Harvest	C Unit Cost Peak Price	(A*B) Total at Harvest	(A*C) Total at Peak
Revenue						
Maize	50 kg bag	30	900	5500	27,000	165,000
Total Revenue					27,000	165,000
Non-Labour Inputs						
Seed, Fertilizer, Chemicals						
Seed	kg	10	700	700	7,000	7,000
NPK	50 kg bag	2	16500	16500	33,000	33,000
Urea	50 kg bag	2	16900	16900	33,800	33,800
Pesticide: 1 bottle to 8 bags	bottle	3,75	750	750	2,813	2,813
Sub-total Seed, Fertilizer, Chemicals					76,613	76,613
Other Costs						
Sacks/bags	50kg bag	30	150	150	4,500	4,500
Thread	lumpsum	1	3000	3000	3,000	3,000
Sub-total Other Costs					7,500	7,500
Total Non-Labour Inputs					84,113	84,113
Labour Inputs - Hired						
Land clearance	contract	1	4000	4000	4,000	4,000
Ridging	contract	1	5750	5750	5,750	5,750
Planting	contract	1	2000	2000	2,000	2,000
First fertilizer application	50kg bag	2	2000	2000	4,000	4,000
Second fertilizer application	50kg bag	2	2000	2000	4,000	4,000
First weeding	contract	1	4000	4000	4,000	4,000
Second weeding	contract	1	5750	5750	5,750	5,750
Cutting of crop residues	contract	1	2000	2000	2,000	2,000
Dehusking	contract	1	3000	3000	3,000	3,000
Transportation from field	ox-cart	7	600	600	4,200	4,200
Shelling: 2.5 x 20 ltr tin = 1 bag	bag	12	125	125	1,500	1,500
Winnowing, cleaning, bagging and sewing	bag	30	100	100	3,000	3,000
Transportation to warehouse	ox-cart	30	100	100	3,000	3,000
Total Labour Inputs - Hired					46,200	46,200
Total Inputs and Labour					130,313	130,313
Gross Margin Maize - Chisemphere					-103,313	34,688

Maize - Mwanyamula		Per Acre in Malawi Kwacha				
Description	Unit	A Quantity	B Unit Cost at Harvest	C Unit Cost Peak Price	(A*B) Total at Harvest	(A*C) Total at Peak
Revenue						
Maize	50 kg bag	25	1000	6000	25,000	150,000
Total Revenue					25,000	150,000
Non-Labour Inputs						
Seed, Fertilizer, Chemicals						
Seed	kg	10	700	700	7,000	7,000
NPK	50 kg bag	1	17,000	17,000	17,000	17,000
Urea	50 kg bag	1	16,800	16,800	16,800	16,800
Pesticide: 1 bottle to 8 bags	bottle	3,125	750	750	2,344	2,344
Sub-total Seed, Fertilizer, Chemicals					43,144	43,144
Other Costs						
Sacks/bags	50kg bag	25	150	150	3,750	3,750
Thread	lumpsum	1	500	500	500	500
Sub-total Other Costs					4,250	4,250
Total Non-Labour Inputs					47,394	47,394
Labour Inputs - Hired						
Land clearance	contract	1	4000	4000	4,000	4,000
Ridging	contract	1	6500	6500	6,500	6,500
Planting	contract	1	2000	2000	2,000	2,000
First fertilizer application	50kg bag	2	2000	2000	4,000	4,000
Second fertilizer application	50kg bag	2	2000	2000	4,000	4,000
First weeding	contract	1	2000	2000	2,000	2,000
Second weeding	contract	1	4000	4000	4,000	4,000
Cutting of crop residues	contract	1	3000	3000	3,000	3,000
Dehusking	person days	42	140	140	5,880	5,880
Transportation from field	ox-cart	7	500	500	3,500	3,500
Shelling: 2.5 x 20 ltr tin = 1 bag	bag	10	50	50	500	500
Winnowing and cleaning	contract	1	3000	3000	3,000	3,000
Bagging and sewing	contract	25	300	300	7,500	7,500
Transportation to warehouse	ox-cart	25	200	200	5,000	5,000
Total Labour Inputs - Hired					54,880	54,880
Total Inputs and Labour					102,274	102,274
Gross Margin	Maize - Mwanyamula				-77,274	47,726

Maize - Chikwatula FO						
Per Acre in Malawi Kwacha						
	A	B	C	(A*B)	(A*C)	
Description	Unit	Quantity	Unit Cost at Harvest	Unit Cost Peak Price	Total at Harvest	Total at Peak
Revenue						
Maize	50 kg bag	44	3000	7750	132.000	341.000
Total Revenue					132.000	341.000
Non-Labour Inputs						
Seed, Fertilizer, Chemicals						
Seed	kg	10	850	850	8.500	8.500
Basal fertilizer	50 kg bag	4	17000	17000	68.000	68.000
Pesticide: 1 bottle to 4 bags	bottle	11	650	650	7.150	7.150
Sub-total Seed, Fertilizer, Chemicals					83.650	83.650
Other Costs						
Sacks/bags	50kg bag	44	150	150	6.600	6.600
Thread	lumpsum	1	3000	3000	3.000	3.000
Sub-total Other Costs					9.600	9.600
Total Non-Labour Inputs					93.250	93.250
Labour Inputs - Hired						
Land clearance	contract	1	4000	4000	4.000	4.000
Ridging	contract	1	6000	6000	6.000	6.000
Planting	contract	1	4000	4000	4.000	4.000
First fertilizer application	50kg bag	2	1500	1500	3.000	3.000
Second fertilizer application	50kg bag	2	1500	1500	3.000	3.000
First weeding	contract	1	6750	6750	6.750	6.750
Second weeding	contract	1	7500	7500	7.500	7.500
Cutting of crop residues	contract	1	4000	4000	4.000	4.000
Dehusking	contract	1	5000	5000	5.000	5.000
Transportation from field	5 tonne truck	2	15000	15000	30.000	30.000
Shelling: 2.5 x 20 ltr tin = 1 bag	bag	176	100	100	1.760	1.760
Bagging and sewing	contract	1	3000	3000	3.000	3.000
Total Labour Inputs - Hired					78.010	78.010
Total Inputs and Labour					171.260	171.260
Gross Margin Maize - Chikwatula FO					-39.260	169.740

Maize - Kaso FO							Per Acre in Malawi Kwacha		
Description	Unit	A Quantity	B Unit Cost at Harvest	C Unit Cost Peak Price	(A*B) Total at Harvest	(A*C) Total at Peak			
Revenue									
Maize	50 kg bag	40	2500	8000	100.000	320.000			
Total Revenue					100.000	320.000			
Non-Labour Inputs									
Seed, Fertilizer, Chemicals									
Seed	kg	10	750	750	7.500	7.500			
Roundup herbicide	litre	1	4500	4500	4.500	4.500			
Hannis herbicide	litre	1	4000	4000	4.000	4.000			
NPK	50 kg bag	2	17500	17500	35.000	35.000			
Urea	50 kg bag	2	16500	16500	33.000	33.000			
Pesticide: 1 bottle to 8 bags	bottle	5	800	800	4.000	4.000			
Sub-total Seed, Fertilizer, Chemicals					88.000	88.000			
Other Costs									
Sacks/bags	50kg bag	40	150	150	6.000	6.000			
Rent	acre	1	5000	5000	5.000	5.000			
Sub-total Other Costs					11.000	11.000			
Total Non-Labour Inputs					99.000	99.000			
Labour Inputs - Hired									
Land clearance	contract	1	3000	3000	3.000	3.000			
Ridging	contract	1	6000	6000	6.000	6.000			
Planting	contract	1	2500	2500	2.500	2.500			
First fertilizer application	50kg bag	2	1500	1500	3.000	3.000			
Second fertilizer application	50kg bag	2	1500	1500	3.000	3.000			
Cutting of crop residues	contract	1	3000	3000	3.000	3.000			
Dehusking	contract	1	6000	6000	6.000	6.000			
Cutting of crop residues	contract	1	4000	4000	4.000	4.000			
Transportation from field	7 tonne truck	2	8000	8000	16.000	16.000			
Shelling: 2.5 x 20 ltr tin = 1 bag	bag	16	1875	1875	3.000	3.000			
Transportation from field	5 tonne truck	2	15000	15000	30.000	30.000			
Cleaning and grading	bag	40	50	50	2.000	2.000			
Bagging and sewing	bag	40	50	50	2.000	2.000			
Transportation to warehouse	bag	40	200	200	8.000	8.000			
Total Labour Inputs - Hired					91.500	91.500			
Total Inputs and Labour					190.500	190.500			
Gross Margin	Maize - Kaso FO				-90.500	129.500			

Mwandama Maize intercropped with pigeon pea and beans - FO Zero Tillage Conservation Agriculture		Per Acre in Malawi Kwacha				
Description	Unit	A Quantity	B Unit Cost at Harvest	C Unit Cost Peak Price	(A*B) Total at Harvest	(A*C) Total at Peak
Revenue						
Beans	50 kg bag	5	7500	25000	37500	125.000
Maize	50 kg bag	50	3000	9000	150.000	450.000
Pigeon pea	50 kg bag	5	5000	9000	25.000	45.000
Total Revenue					212.500	620.000
Description	Unit	Quantity	Unit Cost	Unit Cost	Total	Total
Non-Labour Inputs						
Seed, Fertilizer, Chemicals						
Maize seed	kg	10	750	750	7.500	7.500
Pigeon pea seed	kg	3	120	120	360	360
Bean seed	kg	5	500	500	2.500	2.500
NPK	50 kg bag	1	16000	16000	16.000	16.000
Urea	50 kg bag	1	16000	16000	16.000	16.000
Pesticide beans - atelic liquid 1 bottle x 10 bags	250 ml bottle	0,5	2500	2500	1.250	1.250
Pesticide maize	bottle	5	2500	2500	12.500	12.500
Sub-total	Seed, Fertilizer, Chemicals				56.110	56.110
Other Costs						
Sacks/bags	50kg bag	60	100	100	6.000	6.000
Sub-total	Other Costs				6.000	6.000
Total					62.110	62.110
Description	Unit	Quantity	Unit Cost	Unit Cost	Total	Total
Labour Inputs - Hired						
Ridging	contract	1	5750	5750	5.750	5.750
Planting maize and pigeon peas	contract	1	2000	2000	2.000	2.000
Planting beans	contract	1	1000	1000	1.000	1.000
First fertilizer application	50kg bag	1	2000	2000	2.000	2.000
Second fertilizer application	50kg bag	1	2000	2000	2.000	2.000
First weeding	contract	1	5000	5000	5.000	5.000
Second weeding	contract	1	6000	6000	6.000	6.000
Plucking of beans	contract	1	6000	6000	6.000	6.000
Threshing, bagging and grading beans	bag	5	250	250	1.250	1.250
Dehusking and transportation from field in baskets	person days	24	500	500	12.000	12.000

Dehusking and transportation from field in baskets	person days	24	500	500	12.000	12.000
Shelling: 2.5 x 20 ltr tin = 1 bag	bag	20	150	150	3.000	3.000
Winnowing	bag	50	100	100	5.000	5.000
Plucking and carrying pigeon peas	contract	1	2000	2000	2.000	2.000
Pesticide application maize	contract	1	1500	1500	1.500	1.500
Bagging and sewing maize	bag	50	100	100	5.000	5.000
Transportation to warehouse per 10 bags	truck	5	8500	8500	42.500	42.500
Bagging and sewing pigeon peas	bag	5	100	100	500	500
Total Inputs and Labour	Labour Inputs - Hired				114.500	114.500
Gross Margin	Mwandama Maize intercropped with pigeon pea and beans - FO Zero Tillage				176.610	176.610
	Conservation Agriculture				35.890	443.390

