

CAMBODIAN AGRICULTURAL VALUE CHAIN PROGRAMME (CAVAC)

Mid-term review

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SUMMARY

AusAID's goal in rural development in Cambodia is to reduce poverty by promoting growth in the value of agricultural production so that poor farmers become better off. The Cambodian Agricultural Value Chain (CAVAC) programme is a five-year, AUD48m initiative which aims to reduce rural poverty in three provinces by raising the productivity and incomes of male and female farmers.

A Mid-Term Review (MTR) was commissioned to assess the programme's progress and to guide its future direction. This report contains the findings and recommendations of that Review.

Is CAVAC relevant and is it likely to achieve its objectives? An agricultural pathway out of poverty is valid given that more than two thirds of the Cambodian population depends on small-scale agriculture for their livelihoods. It is also consistent with Cambodian government policy and complements AusAID's other rural development initiatives in the country.

CAVAC is two years into its implementation and the MTR has a high degree of confidence in CAVAC's management. In a comparatively short time commendable progress has been made: CAVAC has well-managed operations, a competent team and a promising portfolio of interventions. It must be emphasised however, that the MTR's judgement on CAVAC's performance is based on an assessment of its progress to date and *projected* final impact on farmers. Projections are based on assumptions and therefore require a caveat: they should not be treated as actual achievements. The MTR has reviewed these assumptions and is satisfied that CAVAC's projections are realistic.

CAVAC is likely to exceed its objectives and will represent very good value for money for AusAID, with a projected benefit-to-cost ratio of seven to one. It will impact on the livelihoods of commercial, semi-intensive, seasonal and subsistence farmers living in poverty or vulnerable to falling into poverty. It takes a rigorous approach to understanding the effects of its interventions on poor women and men, and has put in place a monitoring and results measurement system which is in line with international good practice.

By 2016, it is expected that approximately AUD40m of additional net income will be generated annually as a result of interventions by the programme, benefitting 160,000 small farmers within three target provinces, and an additional 70,000 in other provinces. At least 32,000ha of land will be served by new irrigation systems supported by CAVAC, which will produce an additional 200,000 tonnes of paddy a year. Interventions to improve farming practices and inputs on irrigated and non-irrigated land are expected to raise rice farmers' yields by an average of at least 10%.

Is CAVAC's approach valid? For poor farmers to make more money, they need to produce more of the crops that are in demand, at the right quality and at the right time. They need knowledge, inputs and access to markets to do this – farming techniques, water, seeds, fertiliser and pesticides.

The problem is that rural areas are distant and disconnected: populations are spread out, infrastructure is poor, and resources and information are scarce, particularly for poor farmers. They struggle to get what they need; equally those that want to trade with or support farmers struggle to reach them. Transaction costs are high and efficiency is low, limiting scale and viability.

There are no quick fixes to this predicament. Agricultural conditions – tastes, weather, diseases, regulations, business practices – don't stand still, so farmers need to be able to adapt to change. This is why CAVAC focuses – appropriately, in the opinion of the MTR – on strengthening the broader farming system on which farmers depend. The essence of CAVAC's approach is to identify innovations which can overcome these inefficiencies, enabling farmers and public and private 'support providers' to access, communicate and engage with one another in new ways.

CAVAC encourages support providers to recognise the benefits of these innovations for their own organisations, be those benefits from implementing government policies or making a profit, so that they have incentives to adopt them and continue them after CAVAC withdraws. This is the key to achieving scale and sustainability, in a way which would not be possible if CAVAC were to support farmers directly. By stimulating the commitment and investment of others, CAVAC leverages

additional resources, which remain available after the programme ends, generating a greater and more sustainable impact. This is the reason that CAVAC's value for money is likely to be positive.

How does CAVAC impact on the lives of poor farmers? CAVAC's work with support providers is already yielding tangible changes that will benefit farmers:

- New, low-cost irrigation schemes supported by CAVAC and managed locally (involving provincial government, community water groups and private water sellers), will enable 21,000 farming households to grow an additional rice crop of five tonnes/ha each year.
- CAVAC encourages progressive farmers to serve as change agents in their villages: 3,800 'model' farmers have been trained to date and are beginning to act as platforms for dissemination of good practices, linked to government extension offices and private firms. Ninety five percent of those surveyed say that they have shared information with others and three-quarters have observed changes in their neighbours' practices.
- Input suppliers that partner with CAVAC are using their retail networks to provide advice to farmers, as well as providing appropriate fertiliser and pesticides. Working closely with provincial departments of agriculture, approximately 200 retailers have been trained. Anecdotally, input suppliers and retailers report increased sales and improved relations with farmers, and are planning to expand retailer training.
- Mass media and IT platforms, such as call centres and planned Department of Agriculture helpdesks, now have access to an up-to-date agricultural database and an improved agricultural research website, supported by CAVAC. One call centre is increasing its coverage in rural areas by offering agricultural advice and a media firm is producing a TV programme focused on smallholder agriculture, which other firms are showing interest in replicating.

What challenges and risks does CAVAC face? CAVAC has a considerable way to go if it is to achieve the impact projected. Assessing achievements, adjusting interventions, fostering relationships between diverse players and building sustainability will require a lot of hard work.

The MTR believes that CAVAC's portfolio of interventions is well balanced to achieve impact, diversify risk and support government priorities. There is little scope for expanding into new value chains or support systems within the current programme period. It is important that CAVAC doesn't overextend itself.

With the exception of impacts from irrigation, results to date have mostly been at the level of changes within support providers. Over the next year, activities are expected to result in changes in farming practices, followed by impact on farmers. CAVAC will need to continue experimenting with different channels for reaching farmers efficiently. The monitoring and results measurement system will need to provide continuous evidence so that CAVAC can make sensible choices about further activities. CAVAC intends to place particular emphasis on the following areas:

- Assessing sustainability of partner practices and relationships within support systems
- Ascertaining whether impact differs among farmers according to their socio-economic status
- Feeding results into decision-making particularly as the volume of information on results increases

CAVAC is AusAID's first major initiative using a more market-oriented approach, which works extensively with the private sector, as well as with government. Inevitably this shift in approach alters the relationship between government and the programme. CAVAC and AusAID need to continue to manage the implications of this change in relationship judiciously and sensitively.

What are prospects for the future? Projections of an additional 32,000ha of irrigated land under cultivation are based on the assumption that irrigation construction will take place in 2013. For this construction to take place, a six-month no-cost extension to the existing phase (to December 2014) will be required, in order that CAVAC can fulfil twelve-month liability guarantees associated with any new construction.

However, in view of the programme's progress to date, projected impact and current momentum, the MTR believes that AusAID should consider extending the existing phase by eighteen months, at a cost of approximately AUD13.7m. This would enable CAVAC to:

- Include an additional cycle of irrigation construction in 2014, which would cover an additional 15,000ha approximately, enabling about 9,000 additional households to grow an additional rice crop of five tonnes/ha each year.
- Expand and deepen agribusiness and extension activities, increasing sustainability and significantly expanding outreach in the target provinces and also into other provinces.
- Measure results more completely, in terms of farm-level impact and the extent to which CAVAC's work with partners influences other public and private players in Cambodia. This will help AusAID to understand and document the full impact of the programme.
- Synchronise with AusAID's new planning cycles, such as the Country Delivery Strategy.

In view of the potential demonstrated by CAVAC, the MTR also suggests that AusAID should begin to consider a follow-up programme to CAVAC, focused on rural development. This could build on the current programme but expand its scope and coverage into more marginal agricultural areas and other agricultural and related support systems.

The MTR has made recommendations to (i) CAVAC about portfolio management and measurement, as well as human resource management, and (ii) AusAID regarding programme oversight and an extension of the current phase (see overleaf).

Summary of recommendations

- Recommendation 1:** It is recommended that CAVAC's management continues to pay close attention to the level of effort associated with current interventions and any new activities proposed, to avoid over-stretching the team and diluting intervention quality
- Recommendation 2:** It is recommended that CAVAC continues to place monitoring and results measurement at the heart of programme management and operations
- Recommendation 3:** It is recommended that CAVAC's management continues to develop its transition plans for key personnel and, if necessary, consider a backstopping arrangement to secure access to short term expertise
- Recommendation 4:** It is recommended that Cambodian staff contracts are extended to the end of the programme phase and the transition of staff formerly contracted by ACIAR expedited without delay
- Recommendation 5:** It is recommended that any future Team Leader is contracted by the programme's operational contractor and not AusAID
- Recommendation 6:** It is recommended that the consequences of ACIAR's changed role with respect to CAVAC are communicated immediately to key stakeholders by AusAID, jointly with ACIAR
- Recommendation 7:** It is recommended that the SMG's role with respect to CAVAC is streamlined in terms of scope, personnel and frequency, focusing on the achievement of annual milestones and the programme's strategic direction, agreed with AusAID and CAVAC
- Recommendation 8:** It is recommended that the programme period is extended by eighteen months. If AusAID feels an extension is warranted, this intention should be signalled clearly and in writing to the programme contractor by June 2012 to allow annual planning to be adjusted accordingly

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ANNEXES

GLOSSARY

ACIAR	Australian Centre for International Agricultural Research
AusAID	Australian Agency for International Development
CARDI	Cambodian Agricultural Research and Development Institute
CAVAC	Cambodian Agricultural Value Chain programme
CISIS	Cambodian Irrigation Scheme Information System
DCED	Donor Committee for Enterprise Development
FCRMA	Federation of Cambodian Rice Miller Associations
FWUC	Farmer Water User Committee
GDA	General Directorate of Agriculture
IRRI	International Rice Research Institute
MAFF	Ministry of Agriculture, Forestry and Fisheries
MOWRAM	Ministry of Water Resources and Meteorology
MRM	Monitoring and results measurement
MTR	Mid-term review
NCDD	National Committee for Sub-National Democratic Development
NSC	National Steering Committee
PCC	Provincial Coordination Committees
PDA	Provincial Department of Agriculture
PDWRAM	Provincial Department of Water Resources and Meteorology
RGC	Royal Government of Cambodia
SIF	Supplementary Investment Fund
SMG	Sector Monitoring Group

1. INTRODUCTION

1.1. The Cambodian Agricultural Value Chain programme

- (1) AusAID's goal in rural development is to reduce poverty by promoting growth in the value of agricultural production and smallholder incomes. The Cambodian Agricultural Value Chain (CAVAC) programme aims to increase the value of agricultural production and smallholder income, with a focus on rice-based farming and fruit and vegetable production in three provinces (Kampot, Kompong Thom and Takeo). Its **goal** is *reduced rural poverty in targeted provinces* and its **purpose** is *increased productivity for male and female rice-based farmers*.
- (2) CAVAC represents a departure from AusAID's traditional support to rural development in Cambodia. Earlier initiatives were public sector-oriented, focusing on agricultural research and extension, and seed production. CAVAC was designed to take a multi-stakeholder and market-oriented approach, focused more broadly on farming systems, in four main areas:
 - Irrigation and water management: establishing or rehabilitating small- to medium-scale irrigation schemes and providing technical assistance to user groups, so that they are able to operate and maintain these schemes in the longer term.
 - Agribusiness: encouraging agribusiness to improve the supply of agricultural inputs and provide information to farmers about better production practices.
 - Research and extension: improving the availability of knowledge that contributes to agricultural productivity and competitiveness across the value chain.
 - Business environment: analysing and sharing information about the policy and regulatory environment to enhance public-private dialogue and aid the development of conducive public policies and interventions in agriculture.
- (3) CAVAC is a five-year initiative (2009–2014)¹ with a budget of AUD48m². It is funded by AusAID, with oversight by a National Steering Committee (NSC), co-chaired by the Ministries of Agriculture, Forestry and Fisheries (MAFF) and Water Resources and Meteorology (MOWRAM). AusAID represents the Australian Government on the NSC. An AusAID-appointed Team Leader, supported by an operational contractor (Cardno Emerging Markets), is responsible for CAVAC's day-to-day management. The Australian Centre for International Agricultural Research (ACIAR) manages CAVAC's research and extension component and contributes additional funding to this. The programme's implementation and management arrangements have been assessed every six months by an independent Sector Monitoring Group (SMG).

1.2 Mid-term review

- (4) The purpose of the mid-term review (MTR) was to guide the future of CAVAC. Full terms of reference for the MTR can be found in Annex A. The MTR did not seek to duplicate the detailed assessments of the SMG; it was tasked to address three strategic questions:
 - (a) *Should CAVAC continue?*
 - *Are there sufficient grounds to suggest that CAVAC will make a sustainable impact on poverty in rural Cambodia commensurate with the scale of resources at its disposal?*
 - *What progress has CAVAC made, and what progress can CAVAC reasonably be expected to make by programme end date, towards logframe indicators?*

¹ The programme did not commence full implementation until March 2010, when the operational contractor started; therefore, the programme duration is just over four years.

² The total budget for CAVAC is AUD48m, including design, interim activities, tendering, AusAID's monitoring and evaluation, and some studies commissioned by AusAID. The budget for the implementation phase is AUD43m.

(b) What should CAVAC focus on?

- *Assuming the answer to question (a) is yes, where should CAVAC focus its limited resources to maximise the programme's value for money?*
- *Review the portfolio of CAVAC investment proposals and recommend which ones should be pursued and which ones dropped*
- *Highlight the key risks associated with the recommended proposals and how these might be managed*
- *Recommend any other strategic changes to CAVAC – its management, monitoring or oversight – that would maximise its impact and value for money.*

(c) What opportunities might CAVAC present if extended?

- *The AusAID programme in Cambodia is expected to scale up significantly from 2012 to 2015 and beyond. If CAVAC is deemed to be a new and effective approach to development, what else might be achieved given additional resources, time and flexibility in geographical and sectoral scope?*

- (5) The MTR was conducted in March 2012. It involved a visit to Cambodia (11-24 March 2012), with field visits to two provinces, interaction with a variety of stakeholders and a review of key documents. The MTR team was made up of Rob Hitchins (Team Leader), Amnon Golan, Kalyan Mey (SMG members) and Aly Miehlbradt.
- (6) The MTR team would like to thank AusAID, the Royal Government of Cambodia (RGC), CAVAC and the programme's private sector partners for their support and openness throughout the Review.

1.3 Report

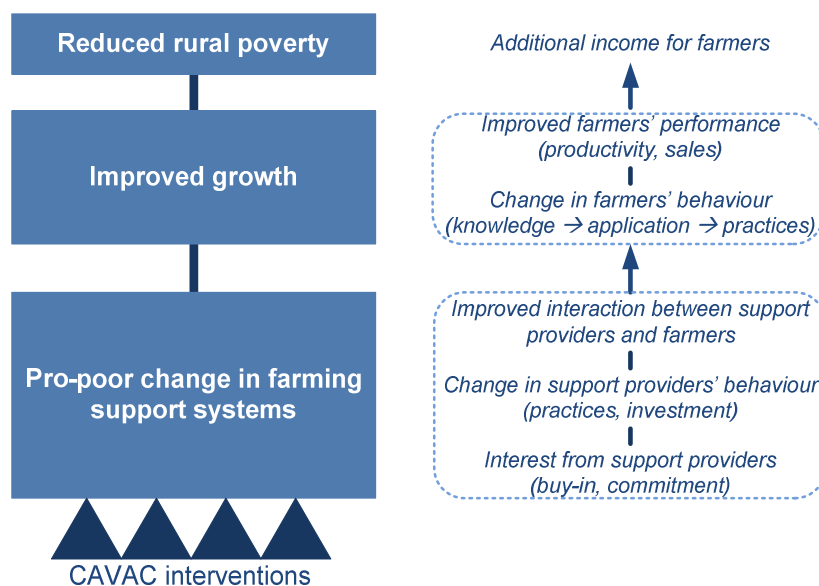
This document consists of six sections, including this introduction. Section 2 reviews CAVAC's progress against its objectives. Section 3 considers CAVAC's portfolio and expected value for money. Section 4 assesses programme management. Section 5 presents the MTR's opinion on the future of CAVAC and Section 6 contains a summary of recommendations made. Annexes contain the MTR's terms of reference, list of stakeholders met, assessments of each of the main support systems in which CAVAC intervenes and explanations of how projections and expected value for money have been estimated.

2. PROGRESS AGAINST OBJECTIVES

2.1 Overview

- (7) This section relates to the MTR's first question: ***the level of progress that CAVAC has made, or is likely to make, towards its objectives by the end of the programme.***
- (8) CAVAC is effectively only two years into its implementation. It was not anticipated that the programme would have made complete progress along its 'theory of change' (ie a change in agricultural support systems leads to improved farmer practices and performance, which contributes to increased income for smallholder farmers – see Figure 1) at this juncture.

Figure 1: CAVAC's theory of change



- (9) The bulk of CAVAC's results to date have been at the intermediate level of this theory of change: changes within private and public partners (although there are some early indications of changes in farm productivity and income). Over the next year, CAVAC's interventions are expected to result in more substantive and widespread changes in farmers' behaviour, which will be followed by changes in farmers' performance.
- (10) The MTR's judgement on CAVAC's performance is therefore based on its preliminary progress along this theory of change and an assessment of its projected final impact on farmers, based on this progress. Projections are based on assumptions and therefore always require a caveat: they should not be treated as actual achievements. However the MTR is satisfied that CAVAC's projections are realistic (see *Section 3 and Annex C*).
- (11) The MTR has a high degree of confidence in CAVAC's management. In a comparatively short time commendable progress has been made: CAVAC has well-managed operations, a competent team and a promising portfolio of interventions. For these reasons the MTR believes that CAVAC is likely to exceed its objectives and result in very good value for money for AusAID³.
- (12) Considerable further effort will be required to achieve these objectives however, and to ensure widespread, sustained adoption of innovations that CAVAC is promoting, and to measure achievements rigorously.

³ A benefit-to-cost ratio of seven to one has been estimated (see *Annex D*).

2.2 Progress towards logical framework objectives

- (13) The **goal of CAVAC is reduced rural poverty in targeted provinces**. CAVAC is likely to contribute to reduced rural poverty in its target provinces and beyond. By 2016, it is expected that approximately AUD40m of additional net income will be generated annually as a result of interventions by the programme, benefitting 160,000 small farmers within the target provinces, and an additional 70,000 in other provinces. This exceeds the programme's preliminary projection of benefitting 130,000 farmers.
- (14) CAVAC was designed to focus on farmers living in poverty or near poverty. It is taking a more rigorous approach to understanding the effects of its interventions on poor women and men than anticipated in its design⁴. It has developed its own poverty strategy and monitoring system, conducted a study of poverty in rural areas and an assessment of poverty transmission mechanisms⁵ and initiated a longitudinal assessment of the socio-economic effects of irrigation interventions.
- (15) The programme will impact the livelihoods of commercial, semi-intensive, seasonal and subsistence farmers living in poverty or vulnerable to falling into poverty. It is estimated that farmers reached in areas without year-round access to irrigation have an average landholding of 1.125ha⁶; farmers with access to year-round irrigation have an average landholding of 1.25ha⁷. Whilst the incidence of poverty is declining rapidly in Cambodia, 71% of the population remains dependent on small-scale agriculture for their livelihoods. CAVAC will reduce poverty primarily by enabling poor smallholder farmers to increase their agricultural production but also by promoting growth in agricultural productivity more broadly.
- (16) In the MTR's opinion, CAVAC's focus on an agricultural pathway out of poverty is valid and is consistent with AusAID's poverty reduction objectives in Cambodia. It complements other AusAID rural development initiatives and supports RGC policy, for instance the Paddy Production and Rice Export Strategy.
- (17) The **purpose of CAVAC is increased productivity for male and female rice-based farmers**. The programme had the following preliminary projections: average yields for rice production increased by 7%; area under dry season irrigation increased by 30,000ha; and 130,000 farmers benefited by June 2016.
- (18) CAVAC is likely to achieve its purpose-level objectives by some margin. As a result of CAVAC's irrigation interventions the area under dry season rice cultivation is expected to expand by at least 32,000ha. Interventions to improve farming practices and inputs on irrigated and non-irrigated land are expected to raise rice farmers' yields by an average of at least 10%. New irrigation and increased yields as a result of better farmer practices are projected to produce an additional 200,000 tonnes of rice annually. Stimulating rice exports and fostering diversification into vegetable production is expected to increase access to higher value markets for 20,000 households.
- (19) The **outcome of CAVAC is improved and continued functioning of support systems for rice-based farmers**. CAVAC aims to stimulate sustainable changes in farming systems on which smallholder farmers depend: irrigation, agricultural inputs and tools, knowledge, non-paddy markets and a more conducive business environment.

⁴ CAVAC "does not have a specific poverty targeting approach... It is recognised that the principal beneficiaries among stakeholders will be those that have the capacity to produce a marketable surplus. These are not the poorest smallholders and some of them may already be living above the official poverty line. The most vulnerable will however benefit indirectly from CAVAC due to improved on-farm labour opportunities and more favourable food prices as the smallholder sector grows." (Project Design Document, 2009; pp23-24)

⁵ Examining how agricultural growth impacts on poverty directly by reaching poor farmers, but also indirectly by increasing incomes and spending more broadly in rural areas, which can increase opportunities for poor people.

⁶ Average farm size, wet season; NCDD data (2008).

⁷ CAVAC data.

- (20) Distance and disconnection are rural realities: populations are spread out, poor infrastructure inhibits communication and trade, resources and information are scarce. Smallholders struggle to get what they need; equally those that want to trade with or support farmers struggle to reach them. Transaction costs are high and efficiency is low, limiting scale and viability. The essence of CAVAC's approach is to identify feasible innovations that overcome these inefficiencies, enabling farmers and support providers (public and private) to access, communicate and engage with one another in new ways.
- (21) CAVAC's approach focuses on encouraging support providers to recognise the benefits of these innovations for their own organisations, so that they have incentives to adopt them and continue using them after CAVAC withdraws. This will be the key to achieving scale and sustainability, in a way that would not be possible if CAVAC were to provide support directly to farmers. By stimulating the commitment and investment of others, CAVAC leverages additional resources, which remain available after the programme ends, generating a greater and more sustainable impact. This is the reason that CAVAC's value for money is likely to be positive.
- (22) A full assessment of the status of CAVAC's main outcomes in each support system can be found in *Annex C*; a summary of each follows below.

2.3 Irrigation

- (23) Reliable access to water is vital for increasing the productivity of rice-based farms. Farmers with assured access to a water source face reduced risks compared with those in purely rain-fed areas and are therefore more likely to innovate and adopt new farming practices. Access to water year-round enables farmers to grow at least one additional rice crop.
- (24) CAVAC focuses on four different areas of irrigation and water management: (i) construction of new feeder canals; (ii) rehabilitation of existing irrigation systems suffering from inoperable canals; (ii) rehabilitation of existing storage reservoirs; and (iii) capacity building of the responsible Farmer Water User Committees (FWUC).
- (25) CAVAC works closely with Provincial Departments of Water Resources and Meteorology (PDWRAM) for new canal identification, planning, construction and maintenance. It rehabilitates existing canals, working with FWUCs that have sufficient funds to contribute a significant proportion of the rehabilitation cost. CAVAC operates a matching grant scheme (the Supplementary Investment Fund or SIF), under which the cost of rehabilitation is shared between CAVAC (up to 75%) and FWUCs (at least 25%)⁸.
- (26) A key feature of CAVAC's approach is a focus on sustainability, manifested in close scrutiny of the feasibility of schemes, construction costs⁹ and the long term ownership and maintenance of schemes. The programme's approach is to work through FWUCs so that they assume responsibility for the operation and maintenance of the irrigation systems. This is mainly managed by PDWRAMs under contract with CAVAC.
- (27) It is expected that by the end of the programme in 2014, at least 32,000ha of land will be covered by the CAVAC-supported irrigation schemes¹⁰. The sustainability of irrigation schemes will hinge on the ability of FWUCs to assume responsibility for the operation and maintenance of the completed schemes and their capacity to collect adequate water charges. It is too early to judge whether completed schemes are being maintained, but there are encouraging signs of FWUC ownership. However, CAVAC recognises that a range of

⁸ Two SIF projects, covering 3,560ha are being implemented in 2012; six additional projects, covering approximately 6,000ha, are expected to be implemented in 2013.

⁹ Full construction costs are, on average cost, under AUD700/ha. Design and construction standards, however, are fully in line with those of irrigation systems being constructed in Cambodia by other international agencies.

¹⁰ This assumes a six-month no-cost extension to permit new canal construction in 2013 (see *Section 5*).

additional capacity building measures will be required before sustainability can be assured. Close monitoring will be required to assess the sustainability of FWUCs and to gain a better understanding of the factors contributing to their success or failure.

2.4 Agricultural inputs and tools

- (28) Agricultural yields in Cambodia are well below those of its neighbours¹¹. One reason for this is the inappropriate use of poor quality inputs – seeds, fertiliser and pesticides. Improving which types of inputs farmers use and how they use them can improve yields significantly.
- (29) CAVAC's main strategy for enabling farmers to improve their use of inputs is to increase their access to relevant information through a variety of public and private channels. CAVAC supports input suppliers to strengthen their distribution networks, by encouraging them to include extension-like activities in their normal business practices. This includes, for example, providing fertiliser recommendation services, conducting field demonstrations and operating their own extension agents. It also includes supporting their retailers to improve retailers' knowledge of good practices and encourage them to provide sound advice to farmers, rather than simply trying to maximise sales. CAVAC encourages input suppliers to see extension-like activities as integral to their marketing strategy, to build customer loyalty, enhance brand image and, ultimately, develop better farmers and customers. If firms see this approach makes good business sense, they are likely to continue it, making it sustainable.
- (30) CAVAC also provides input suppliers with technical assistance to increase the quality and availability of appropriate inputs. CAVAC builds on suppliers' desire to create a positive reputation among farmers by emphasising the link between quality products and reputation.
- (31) CAVAC does not work with input suppliers in isolation, but aims to build links between Provincial Departments of Agriculture (PDA) and firms. The private sector is an important player in farming support systems. Strengthened links between the private sector and PDAs will benefit both in their efforts to reach farmers. CAVAC promotes interaction between PDAs, the private sector and 'model' farmers by supporting PDAs to host 'linking events', and by involving PDAs and the private sector in the training of model farmers.

Seeds

- (32) New seed varieties or better quality seeds can increase yields by 10-50%. CAVAC works with seed producers and seed associations to stimulate demand for better seeds and to increase the supply of high quality seeds of new varieties.
- (33) To date, CAVAC has worked with one medium-sized seed producer on both dry and wet season varieties, and twenty-five small producers and four associations on wet season varieties. Seed producers are using foundation seeds to grow seeds and associations have completed a full wet season with demonstration plots and field days. CAVAC expects to see adoption of new varieties as a result in the 2012 wet season, with further growth in adoption in subsequent years. However, the expansion of the seed market nationally depends on a more

¹¹ Comparative rice production efficiency; 2010 (Source: FAOSTAT)

	Milling rate	Yield tonnes/ha
Cambodia	n/a	3.0
Indonesia	63.5%	5.0
Philippines	63%	4.0
Vietnam	62.5%	6.0

conducive business environment, which encourages private investment and has less inhibitive licensing requirements.

Fertiliser

- (34) Improving the quality of fertiliser available in Cambodia and encouraging appropriate use of fertiliser has the potential to significantly increase yields. CAVAC is working with two suppliers, together with PDAs, in three provinces. These activities are reinforced by work through other information channels. Both suppliers have already improved and expanded their retailer training or farmer extension work. One has also invested in improving the quality of its fertilisers. Retailers appear to have been providing better information to farmers on fertiliser types and application.
- (35) Signs of sustainability include positive feedback about the impact of retailer training on sales (10-15% in one case) and plans by firms to independently expand retailer training. Initial data indicates that retailers are satisfied with the training and are using it to improve their relationships with farmers. There is anecdotal evidence that it is having a positive effect on their sales and customer retention.

Pesticides

- (36) Diseases can reduce yields by up to 50% in dry season rice. Correct application of pesticides can reduce farmers' risks and increase overall production. CAVAC is working with one supplier, together with PDAs, to develop and build capacity for an extension strategy. Critically, however, RGC's official standpoint is ambiguous towards the use of any chemicals in farming. CAVAC has therefore prepared a position paper on pesticides and is planning to develop a common pest control manual with the General Directorate of Agriculture (GDA).
- (37) The current pesticide supplier has increased its sales substantially and is investing further in its retail network. Several other firms and PDAs have shown interest in working with CAVAC.
- (38) Overall, CAVAC's work in input markets is promising, but the business environment, particularly for seeds and pesticides, discourages larger scale investment. Unless the regulatory situation improves it will not be possible to achieve systemic change (see *Business environment*, below). Nevertheless, CAVAC can make a significant direct impact on some farmers and can demonstrate the potential of the market and improved practices to other public and private players.
- (39) Going forward, the MTR feels that taking the following issues into account will enhance the work done to date and planned:
 - Continued engagement with PDAs at the provincial level and, when possible, with national ministries, will ensure that CAVAC stays abreast of the business environment issues and might contribute to changes in policies and regulations. Continuing to involve government agencies in the work with private firms and to build links between government and the private sector may help to influence government's position in the longer term.
 - It will be important for CAVAC to understand how farmers in different circumstances are able to get information on inputs through various channels and the extent to which they change behaviour as a result, particularly those in the most challenging circumstances. Looking for early signs that farmers with little or no access to irrigation, for example, are getting information and changing behaviour will help CAVAC determine which information channels are most effective.
 - It will also be vital to continue monitoring signs of sustainability within input suppliers and the continued growth and deepening of relationships among input suppliers, retailers, PDAs and other support providers for farmers. This will provide CAVAC with information on how to enhance the sustainability of new behaviours among both private and public actors in the provision of quality inputs and information to farmers.

Tools

- (40) Preliminary investigations and activities in the agricultural tools sector focused on drum seeding and dryers, land levelling¹² and pumps¹³. CAVAC has concluded that the private sector is already active in the markets for drum seeders and dryers, so intervention is not warranted. Additional investigations are being conducted to determine whether CAVAC can play a valid role in land levelling and pumps; a decision on whether to continue is expected to be taken by mid-2012. The MTR concurs with this pragmatic approach.

2.5 Knowledge

- (41) Agricultural productivity in Cambodia is constrained by poor knowledge and practices, inhibiting rural income growth and food security. Innovation lies at the heart of CAVAC's approach; encouraging farmers (and those they depend on) to do things differently and build their ability to adjust constantly to ever-changing conditions. It focuses on strengthening the sources and channels on which farmers depend for information and advice.
- (42) CAVAC focuses on information and advice to stimulate innovation among farmers, rather than promoting a particular extension 'model'. It assessed a variety of public and private extension practices, through a combination of secondary research and formal and informal information gathering, concluding that no single extension approach offers a perfect solution. Therefore, the programme is testing a range of sources and channels for information and advice, and the linkages between them. CAVAC will assess which work and why, and stimulate expansion of those that are most effective.

Model farmers

- (43) A key source of information and advice for farmers is other farmers. In any farming community there are a small number of early adopters ('model farmers'), who are usually well recognised, because they are more entrepreneurial and have a greater tolerance for risk. Any new practice tends to be adopted by them first: they experiment and if successful, others follow. Focusing on model farmers is a sensible entry point: they are at the centre of farm-level innovation and provide a platform for other areas of intervention by CAVAC.
- (44) There are an estimated 20,000 model farmers in CAVAC's target provinces. The programme's strategy is to conduct 2,000 short training programmes, with ten model farming households per programme. Training doesn't seek to 'educate' farmers with 'solutions' but equips them with knowledge about how to experiment effectively. CAVAC estimates that approximately 12,000 of those trained will share knowledge with 120,000 'early followers'.
- (45) To establish links between model farmers and other players, CAVAC, working with PDAs, organises 'linking events', which aim to build networks between model farmers, government agencies and the private sector. Other CAVAC interventions, such as media, call centres and helpdesks should further strengthen information flows and networks.
- (46) To date, 449 training programmes have been conducted reaching 4,490 model farming households. Projections to reach 120,000 early followers are realistic, and over time, information and practice change is likely to spread from early to late followers, so outreach will be far higher.
- (47) Feedback on training is highly positive and there are discernible signs of impact: 75% of model farmers surveyed reported a change in fertiliser use and 73% reported an increase in yields. Model farmers appear to be influencing their peers: 95% said they had shared information with others and 77% have noted changes in their neighbours' practices. Links

¹² Drawing from research by the Cambodian Agricultural Research and Development Institute (CARDI).

¹³ A priority for MOWRAM.

between model farmers and other sources of support are not yet extensive, but there are signs of links developing between model farmers and PDAs and input retailers.

- (48) Progress looks promising, but a substantial amount of training is still required to achieve coverage of 20,000 model farmers. Going forward, the MTR feels that there are two issues that CAVAC needs to pay close attention to:
- The extent to which the approach can be successful in more resource-constrained and risk-averse areas (eg only rain-fed) should be monitored closely.
 - The extent to which (i) knowledge transfer to peers occurs, (ii) links between model farmers and other players are established and (iii) whether the approach is taken up by others.

Embedded information

- (49) Farmers lack appropriate knowledge about products and their application; they often turn to retailers for advice, but retailers lack appropriate knowledge themselves. Large suppliers of agricultural inputs are well placed to improve this situation. They often have access to up-to-date information on products and good practices, they have established networks that reach many farmers and they have an incentive to ensure that farmers are informed. Providing farmers with appropriate information alongside sales of inputs has been found to be far more effective than providing inputs in isolation. This kind of 'embedded information' model reflects established practices in developed and, increasingly, developing countries.
- (50) Details of CAVAC's strategy and its progress in stimulating embedded information flows from input suppliers to farmers are included above, under *Section 2.4 Agricultural inputs and tools*.

Wider markets

- (51) Rural economies are characterised by a high degree of disconnection. This affects farmers most, but providers of support to farmers are themselves often poorly connected. Furthermore, sharing information is not a practice that comes naturally in many contexts.
- (52) In what it terms 'wider markets', CAVAC identifies organisations that are able to capture and 'translate' information into comprehensible and practicable forms, and then disseminate it to other providers of agricultural support. CAVAC tests different public and private models, and aims also to change attitudes towards information sharing. This will contribute to the sustainability of changes that CAVAC is trying to stimulate in other support systems.
- (53) So far, CAVAC has developed an agricultural information database for intermediate information providers, such as call centres and helpdesks and is assisting CARDI to make its website more accessible. With CAVAC support, a call centre provider has added agricultural advice to the content it provides. The call centre is being used and other firms are showing interest in the model. CAVAC has agreements with the PDAs in the target provinces to establish helpdesks. With PDAs, CAVAC has held linking events in each province, which have been well attended by support providers¹⁴.
- (54) The sustainability of these initiatives rests on the incentives of public and private players to continue to translate, package and deliver information to support providers. This will depend on how well these activities fit with each player's objectives, be that implementing government policies or making a profit. For example, it will be important to find players willing to update the agricultural information database either for their own use (eg in a call centre) or for distribution to others. CAVAC has seen some interest and investment in these initiatives, but further monitoring of sustainability will be required.
- (55) A focus on information sources for support providers is entirely valid; connections between support providers will be crucial to sustainability. Efforts in this regard have started with the

¹⁴ Five hundred model farmers and retailers and thirty input suppliers attended the first event.

linking events, but more concerted work might be needed to promote models that build on the various information channels that reach and encourage farmers to change their practices.

Associations, traders and NGOs

- (56) Establishing and working through associations or other cooperative bodies is a RGC priority and focus of many development agencies. Internationally, it has been found that the effectiveness of support to such organisations has been mixed, due to a lack of a clear rationale, members' ownership and group cohesion. CAVAC therefore works with such organisations only when it is clear how they can help address genuine market constraints. For example, in paddy exports or the vegetable sector, traders set standards, send signals about consumer preferences and provide information to farmers. To date, interventions have been limited. In the seed sector, seed associations are a potentially important source of improved wet season rice varieties and CAVAC is working with four associations to increase seed supply (see *Agricultural inputs and tools*).

Media

- (57) Commercial media can reach a high number of farmers with agricultural information. CAVAC assists media firms to target farmers with programmes that deliver accurate agricultural information. Firms have an incentive to create appealing programmes that regularly reach a high number of farmers, so that they can attract sponsorship and advertising from other players targeting rural markets. In Cambodia, most rural villages have households and restaurants with TVs and it is common for communities to watch TV together. CAVAC aims to demonstrate the viability of TV programmes targeting farmers by working with production houses and TV stations to develop profit-making agricultural programming.
- (58) CAVAC has completed research on the rural market for media and presented it to the media and business community. CAVAC has partnered with a production firm to produce a weekly programme targeting the rural market. The first episode is currently in production and CAVAC is linking the production firm to sources of information and sponsorship.
- (59) The sustainability of media programmes that CAVAC supports rests on their viability – securing and retaining sponsorship and advertising. Prospects for the first production firm are encouraging. A TV station has agreed to air fifty-two episodes and sponsors are interested.
- (60) CAVAC's work in media looks promising. Demonstrating the viability of entertaining, rural-focused programming has the potential to affect the entire media industry. However, there are a host of constraints: inadequate skills, limited interaction between information sources and production firms, and – most critically – a lack of rural media research. Reaction to CAVAC's media research will therefore be critical; ultimately, research firms need to conduct rural media research regularly if the market is to grow. Given the limits of CAVAC's capacity, management will have to be very selective, determining which of these constraints are priorities that might be addressed feasibly within the remaining programme period.

Research

- (61) ACIAR, in consultation with stakeholders, identified a range of research gaps considered to be of general relevance to farming practices in Cambodia. This included appropriate water management techniques, management of crop diseases, optimal use of fertiliser, application of modern techniques in rice production and new or improved rice varieties.
- (62) CAVAC – through ACIAR – supports four large research projects that are managed by CARDI. CARDI is constrained by a shortage of core funding and limited ability for delivering 'research into use', in spite of considerable amounts of Australian support over the last decade. The introduction of a sustainability strategy for CARDI has been supported, accompanied by short-term financial support to help it retain its pool of scientists. In addition, a modest matching grant scheme was designed to stimulate other research organisations to conduct relevant research.

- (63) The four large research projects are: Rice Germplasm (new varieties), Rice Establishment (modern farming techniques), Horticulture Value Chain (improved vegetable cash crops, input markets and agri-tools) and On-farm Water Management. The first three are in an advanced stage of implementation. While these topics are of general relevance to CAVAC, their results were not expected to be released in time to contribute to the programme's impact. Therefore these projects have not been included in any projections. Despite efforts to strengthen CARDI's financial base, limited material progress has been achieved¹⁵.
- (64) Although research was incorporated into CAVAC's design, in practice integration between research activities and the rest of the programme has been loose (compared, for example, to work on extension). From January 2013 ACIAR will manage the large research projects separately from CAVAC. This will not affect CAVAC's impact. CAVAC will continue to strengthen sources of information and channels of dissemination that are relevant to its objectives, including CARDI research. The main concerns are that: (i) ACIAR-contracted staff who work on CAVAC's extension interventions are transferred expeditiously on to contracts with Cardno, and (ii) the funding implications of this separation are communicated clearly and sensitively to RGC, so as not to disrupt working relations between CAVAC and RGC (see *Section 4*).

2.6 Non-paddy markets

Vegetables

- (65) Cultivating vegetables is an attractive alternative or supplement to other crops for farmers and can contribute to rural labour opportunities for poor people and to improved nutrition. CAVAC initially focused on lack of access to information on vegetable seeds and related production techniques, by training vegetable seed retailers to improve their knowledge of vegetable production and to encourage them to share this information with farmers. Recently CAVAC has expanded its work in the vegetable value chain beyond the three target provinces and is considering addressing access to irrigation and post-harvest handling.
- (66) CAVAC has trained fifty-one vegetable seed retailers, with an estimated outreach of 1,900 farmers to date. The response has been positive: retailers have reported providing better information to farmers and improved relations with farmers. It is too early to assess behaviour changes among farmers or the sustainability of new retailer behaviours. However, two input firms have now shown interest in partnering with CAVAC on similar initiatives.
- (67) The MTR feels that there is considerable potential for synergy between interventions focusing on rice inputs and information and those focusing on vegetable inputs and information. Consideration of how to capitalise on the fact that many support providers and farmers operate in both value chains will help CAVAC to maximise impacts on vegetable farmers.

Rice export trading and processing

- (68) RGC is committed to increasing exports of milled rice, which offers the potential for increased value-addition in Cambodia. The export market demands higher quality rice, which requires that farmers produce higher value paddy for milling. Producing higher value paddy benefits farmers as they will get higher returns. However obstacles abound: large modern mills operate well below their capacity; medium-sized mills lack capital to buy and store rice; milled output is of poor quality; and trade logistics and port facilities are poor.
- (69) CAVAC's efforts to support RGC's rice policy only started recently and the scope and potential impact of interventions is not fully clear. CAVAC intends to work with millers so that they can support farmers in upgrading to higher value rice varieties and improving their farming practices. Currently it plans to train the staff of one large mill in contract farming, which will

¹⁵ After the MTR team had left Cambodia, CAVAC reported that RGC has increased its funding to CARDI in relation to the Paddy Production and Rice Export policy.

then train farmers. The programme is also supporting the Federation of Cambodian Rice Miller Associations (FCRMA) to promote access to export markets, by sharing costs of promotion trips abroad by FCRMA and foreign buyer visits to Cambodia, to establish initial contacts and to check milling facilities and products.

- (70) Sustainability will depend on new practices being profitable for farmers and also attractive for millers, by allowing them to utilise their mills at higher capacities and increase exports. Activities have only commenced recently and the programme is expecting to monitor them closely and adjust them as necessary.

2.6 Business environment

- (71) A range of business environment issues impinge on the support systems in which CAVAC is operating, in particular irrigation, seeds and pesticides. CAVAC has researched these issues, but has not found a way to engage with RGC to work towards their resolution. This is not surprising: international experience has found that it can be difficult for aid programmes to advocate effectively for policy and regulatory reform when they are too close to the parts of governments that formulate those policies and regulations. RGC's role in CAVAC's NSC inhibits the programme's ability in this regard. Consequently, with the agreement of AusAID, CAVAC has refocused its work on monitoring, analysing and communicating changes in the business environment and their likely effects. CAVAC has also focused more narrowly on RGC's role and relations with the private sector within its other areas of intervention (see 4.2 *Programme oversight*).
- (72) CAVAC also intended to support the development of physical market places, but stakeholders were unreceptive, due to tensions between the public and private sectors. For this reason, CAVAC and the Asia Foundation investigated the potential for public-private dialogue to overcome such tensions, but it is too early to report on progress.
- (73) CAVAC operates a Policy Support Facility to fund policy studies initiated by RGC (or initiatives that AusAID considers priorities, such as an agricultural census) and provides financial support to the Technical Working Group on Agriculture and Water. To date, proposals received under the Policy Support Facility have tended to be requests for operational support rather than for policy studies.
- (74) The effects of business environment activities are not captured in CAVAC's MRM system, as any impact is not expected to be attributable within the CAVAC's lifetime.

3. PORTFOLIO MANAGEMENT AND VALUE FOR MONEY

- (75) This section relates to the MTR's second question: *the optimum focus of CAVAC's interventions and the programme's likely value for money.*

3.1 Portfolio focus

- (76) CAVAC is making good progress towards its main outcomes. The MTR is encouraged by the degree of integration within the programme, with the exception of the four large research projects. Resolving key business environment issues would enhance prospects for large-scale change, but the MTR recognises that this is unlikely to be feasible in the near future.
- (77) The MTR sees no reason for any significant adjustments in the portfolio. CAVAC management is already reviewing the validity of working in agri-tools, which the MTR concurs has the most marginal prospects. If this review is unfavourable then activities should be phased out.
- (78) Although progress to date is commendable, CAVAC's management recognises that the hard work is only just beginning: the tasks of assessing achievements, adjusting interventions, fostering relationships between diverse players and building sustainability will require considerable amounts of 'leg work' by the project. The MTR is reassured by management's recognition of this challenge and the need to monitor the team's workload closely.
- (79) Sustainability is central to CAVAC's distinctive approach and will be the key to achieving lasting, large scale impact. Ensuring that changes stimulated by the programme are genuinely sustainable should therefore be a priority for remainder of the programme.
- (80) For these reasons the MTR does not believe that CAVAC has sufficient capacity to expand its scope or sectoral coverage during the remaining programme period. If the programme were to be extended, it would permit additional irrigation construction and scaling up of agribusiness activities (or 'crowding in', ie the adoption by new market players of business models with similar key features to those promoted by CAVAC), with limited geographic expansion of some activities, but not entry into new sectors.

Recommendation 1: It is recommended that CAVAC's management continues to pay close attention to the level of effort associated with current interventions and any new activities proposed, to avoid over-stretching the team and diluting intervention quality

3.2 Portfolio monitoring and results measurement

- (81) The MTR has scrutinised CAVAC's monitoring and results measurement (MRM) system carefully and concluded that a solid system is in place for monitoring progress, measuring results and using that information to steer implementation¹⁶. The MRM unit has two dedicated staff, supported by a part-time international manager, and has been renamed the 'Quality' unit to emphasise its role in helping task forces¹⁷ to make impact-maximising decisions. An internal MRM guide for staff has been drafted, which will be revised during 2012.
- (82) Results chains for all active interventions have been developed, along with a comprehensive monitoring plan that includes assessments to measure changes up the levels of the results chains as they are expected to happen for each intervention¹⁸. A system to catalogue assessments of results per support system is in place.
- (83) Indicators for assessing behaviour change in relevant support systems have been developed. Testing of these indicators is on-going so that CAVAC is prepared for farmer-level behaviour change assessments, which will be conducted later in 2012.

¹⁶ The system is in line with international good practice, eg the Donor Committee for Enterprise Development (DCED) Results Measurement Standard.

¹⁷ CAVAC organises its technical staff into 'task forces': small, flexible teams to implement different interventions.

¹⁸ Except for research interventions, which have followed a different format, used by ACIAR.

- (84) Gender, economic status and disability are incorporated into monitoring plans, based on a study of types of farming households and the respective decision-making practices of women and men in those households. Further refinements may be necessary as indicators and tools are tested in the field.
- (85) To feed information on results into decision-making, a three-month review system has been established, where task forces discuss progress in each support market, based on formal and informal information gathering, and make or revise intervention plans as necessary.
- (86) The bulk of CAVAC's results to date have been at the intermediate level of results chains: changes within private and public partners – their investments, plans and interactions with farmers. The sustainability of changed partner behaviour will determine the extent to which better products, services and information will continue to be available to farmers after the end of the programme. CAVAC will need to continue assessing partners to ascertain if new behaviours are likely to last after CAVAC support ends. This will help CAVAC adjust activities with existing and new partners to maximise the prospects for sustainability.
- (87) Over the next year, CAVAC's interventions are expected to result in changes in farmer behaviour, which will be followed by changes in farmer performance. The assessments of these changes (based on the tested indicators mentioned above) will be crucial, providing CAVAC with information to determine the extent to which interventions are resulting in desired farmer-level impact and how they may need to be adjusted.
- (88) Over the next two years, CAVAC will need to continue experimenting with different channels for reaching farmers efficiently with information, services and products. A solid MRM system will provide CAVAC with evidence on how effectively different channels reach farmers and help the programme make decisions about how to improve those channels.
- (89) Given the considerations above, CAVAC recognises that important next steps in the development and use of the MRM system will include:
 - Continuing to assess signs of sustainability among partners qualitatively and, to the extent possible, quantitatively, as well as through different mechanisms (eg staff observation, structured interviews, partners' records etc).
 - Gathering data from different types of farmers to determine whether impacts differ among farmers depending on their socio-economic status. Studies to assess impacts on farmers should gather data from farmers with different levels of access to water, different amounts of land and different household situations (based on gender and disability issues).
 - Ensuring that the system for feeding results into decision-making continues to function effectively as the volume of information collected increases.

Recommendation 2: It is recommended that CAVAC continues to place monitoring and results measurement at the heart of programme management and operations

- (90) The MTR endorses the continued core role for MRM in programme management, with a particular focus on the points above; it will be central to CAVAC maximising results over the life of the programme.
- (91) Because CAVAC represents a new approach for AusAID, the reporting on the programme will be particularly important to inform AusAID's learning and future programming. With this in mind, the MTR suggests that CAVAC and AusAID consider the following:
 - The end of programme report should not only estimate direct results among farmers but should also discuss results and sustainability among support providers, examine changes in the operating norms of support systems and targeted value chains, and estimate quantitatively the expected future impacts from additional support providers 'crowding-in'.
 - Because many of CAVAC's results will only be evident after the programme is finished, AusAID should make provision for a small monitoring team to continue on the ground for at

least two years after the end of the programme to assess farmer level impacts, sustainability of behaviour changes throughout the systems and changes in the operating norms of the targeted value chains and support systems. This monitoring and results measurement could be configured as a two-year contract for two local staff with periodic support from an international MRM specialist or incorporated in a follow-on programme.

3.3 Value for money

- (92) To ascertain the likely value for money that CAVAC represents for AusAID, the MTR has estimated the benefit-to-cost ratio for the programme, based on information provided by CAVAC. The basis for the estimation is projections of benefits, actual costs to date and expected costs to the end of the programme. It must be emphasised that the figures above are *projections*, not historical data and will change as measurements are taken and results estimated over the remainder of the programme. The MTR has checked that the projections are based on reasonable assumptions and research, but has not verified individual figures independently (see *Annex D*).
- (93) For the purpose of the analysis, the benefits are projected annual additional income to farming households expected to result from CAVAC interventions, excluding those interventions, such as research and business environment, which are either too far in the future or too difficult to project reasonably. The costs are the AUD26m projected to be spent for direct and overhead costs of interventions during the implementation phase¹⁹.
- (94) Based on these projected benefits and costs, the expected benefit-to-cost ratio ranges from more than ten to one to approximately three to one, depending on the discount rate and the time horizon used. Using a ten-year time horizon from the start of the programme in 2010 and a 6% discount rate, the benefit-to-cost ratio is approximately seven to one. Even if the full implementation phase budget of AUD43m is used, the projected benefit-to-cost ratio would still be positive, above three to one for the ten-year time horizon, with a 10% discount rate. This indicates that CAVAC is likely to represent good value for money under any scenario.
- (95) It is important to note that the benefit-to-cost analysis is from the perspective of CAVAC. The costs are those incurred by the programme. The benefits are expected additional income to farming households, reflecting CAVAC's goal of reducing rural poverty. CAVAC support also leverages considerable private sector investment (eg water sellers are investing in the distribution of water from CAVAC-built irrigation schemes, input suppliers are investing in upgrading their retail networks or extension activities, a media firm is investing in producing an agricultural programme). This investment by firms in activities that contribute to CAVAC's goal shows how AusAID's funds are being leveraged to maximise impact.
- (96) The benefit-to-cost analysis is not from the perspective of the economy as a whole. If it were, this private investment would conventionally be represented as an economic 'cost'. These costs have not been included in the benefit-to-cost analysis because they are not costs to CAVAC. These investments will generate additional profits for private firms and consequently create 'multiplier effects', in the form of increased incomes and expenditures by those firms, their workers and suppliers. These profits and multiplier effects have not been included in the benefit-to-cost analysis because they are not benefits to CAVAC's target group: poor farmers. If these wider effects were quantified CAVAC's economic benefit is likely to be considerably higher than stated.

¹⁹ The MTR estimates that AUD26m will be used by CAVAC for impact-generating interventions during the implementation phase. Research and business environment activities are excluded because these interventions are not included in any impact projections. Pre-March 2010 mobilisation costs, including AusAID's costs for design and inception, administration and oversight are also excluded.

4. PROGRAMME MANAGEMENT AND OVERSIGHT

4.1 Programme management

- (97) CAVAC's operations are well managed, a competent team has been assembled and effective systems have been established for managing, monitoring and measuring a large portfolio of interventions.
- (98) CAVAC has worked hard to deal with the challenges of operationalising a new approach within AusAID systems. Important lessons have been learnt which, in due course, might be documented for future programmes.
- (99) CAVAC has assembled a high-calibre team. Wider experience shows the vital role that the right type of people play in successful implementation of this kind of programming. However, in spite of best efforts to retain staff, it is inevitable that key personnel will leave over time. The MTR is reassured that the management team is developing transition plans to mitigate this eventuality. Given the changing needs of the programme (eg communication, *see Section 4.2*) as well as potential changes in personnel, it might also be prudent to establish 'backstopping' arrangements, which permit access to short term expertise to plug any shortfalls in capacity.
- (100) There are two personnel issues that require immediate resolution: (i) Cambodian staff are only contracted to June 2012, which is causing understandable disquiet; and (ii) the transition of staff contracted under ACIAR to the programme's operational contractor. Looking further ahead, it is unusual for a Team Leader to be contracted by the funder and not the operational contractor. While there were unique reasons for this arrangement and it does not undermine implementation currently, it does result in duplication of effort and complicates management. In future the Team Leader should be contracted by the programme's operational contractor.

Recommendation 3: It is recommended that CAVAC's management continues to develop its transition plans for key personnel and, if necessary, consider a backstopping arrangement to secure access to short term expertise

Recommendation 4: It is recommended that Cambodian staff contracts are extended to the end of the programme phase and the transition of staff formerly contracted by ACIAR expedited without delay

Recommendation 5: It is recommended that any future Team Leader is contracted by the programme's operational contractor and not AusAID

Communication

- (101) As CAVAC matures and begins to achieve results among target farmers, it will need to pay more attention to communicating those results and disseminating information about the programme to stakeholders in Cambodia, Australia and beyond. Key target audiences will be Australian and Cambodian politicians, government officials and citizens, as well as the wider international development community.
- (102) All aid programmes have the responsibility to communicate their results to various stakeholders. However, the communication challenge for CAVAC goes beyond that of most aid programmes. CAVAC employs a new approach for AusAID and for Cambodia. CAVAC will need to intensify its efforts to explain its approach within Australia and Cambodia. In AusAID, there is interest in understanding the approach better and gauging its results relative to other approaches to rural development. The broader Australian audience is more interested in clear statements of results than approaches per se. In Cambodia, CAVAC's approach is not always well understood. CAVAC can use its results as an entry point to explaining its approach to rural development. As these audiences have different interests, targeted communication materials will be needed to ensure that various stakeholders are satisfied with the information provided and CAVAC and AusAID are able to achieve their communication objectives.

- (103) CAVAC plans to hire a dedicated communication specialist to handle the increased need for the dissemination of information about the programme and its results. Additional resources, such as short-term expertise in particular communication media, will also likely be required to ensure that CAVAC can effectively reach its diverse audiences.
- (104) It will also be critical that AusAID and CAVAC work together and in a timely fashion to discuss communication strategies and to prepare and disseminate various communication pieces over the remainder of the programme.

4.2 Programme oversight

- (105) A constructive relationship has developed between AusAID Post and CAVAC management. This has required effort by both parties, but it is a valuable investment that will need to continue for the remainder of the programme. Equally, the MTR is pleased to see that CAVAC's relationship with RGC has improved, and is particularly encouraged to see constructive working relationships between government and the programme at the provincial level (see below).
- (106) The change in ACIAR's role in the programme is unfortunate and has immediate implications for staffing, funding, activities and stakeholder expectations.

Recommendation 6: It is recommended that the consequences of ACIAR's changed role with respect to CAVAC are communicated immediately to key stakeholders by AusAID, jointly with ACIAR

- (107) Regular reviews of CAVAC by the SMG have helped build AusAID's confidence in the programme, at a time when CAVAC was regarded as a risky departure from traditional programming. Given that Post's confidence in CAVAC is now higher and that relations with the programme are constructive, the rationale for the SMG is reduced and it should have a more streamlined mandate going forward, assisting Post and CAVAC to make decisions on key areas of programme strategy and performance. The SMG's attention should be re-focused on AusAID's overall rural development portfolio.

Recommendation 7: It is recommended that the SMG's role with respect to CAVAC is streamlined in terms of scope, personnel and frequency, focusing on the achievement of annual milestones and the programme's strategic direction, agreed with AusAID and CAVAC

Relations between CAVAC and RGC

- (108) RGC is afforded a prominent role in CAVAC's oversight and implementation, at national and provincial levels. Experiences from similar programmes of this nature (ie one designed to work in multiple support systems with a diversity of public and private partners) show that this set up is not practical as it restricts the flexibility and scope of implementation. Similar programmes funded by other bi-lateral agencies tend to have less structured or integrated relationships with government, even when they work with government quite closely.
- (109) CAVAC's formal RGC counterparts are MAFF and MOWRAM. As co-chairs of the NSC, they oversee CAVAC's annual work plan. Deputy team leaders from both ministries were supposed to work on the programme, but their involvement with CAVAC is constrained by their other responsibilities assigned by their respective ministries (particularly in the case of MAFF). Programme progress has been regularly shared with national and provincial levels of government through monthly and six-monthly reports. Working relations were rather fragile at the beginning of the programme, but at the time of the MTR the situation has improved, particularly at the provincial level.
- (110) At the national level, CAVAC's working relations with government are as follows:
- The four large research projects are carried out with CARDI and GDA.
 - CAVAC is negotiating with GDA to get its involvement in agribusiness activities.

- CAVAC is supporting MOWRAM's Cambodian Irrigation Scheme Information System (CISIS).
- CAVAC assists MAFF with training materials and costs through its 'policy support facility'²⁰ and supports capacity building in MOWRAM, eg value chain training in the Philippines.

(111) At the provincial level, CAVAC consults with the heads of the Provincial Coordination Committees (PCC), PDAs and PDWRAMs when developing the annual work plan. Provincial departments are also informed of field activities conducted by the programme. CAVAC's working relations with PDAs are as follows:

- Detailed agreements of collaboration between CAVAC and PDAs, through which CAVAC will pay for priority activities set by the PDAs.
- PDAs take the lead on important issues such as forming farmers' associations, supporting seed producers, demonstrations for new rice varieties, agricultural training, a pilot farming project and a large environmental study (the latter two in Kampot).
- PDAs and CAVAC work closely in activities such as linking events, help desks and training of pesticides retailers, and PDAs also participate in CAVAC-led activities, such as model farmer and input retailer training, through the presence of its district extension staff.
- CAVAC offers capacity-building opportunities to PDAs such as visits to Vietnam and International Rice Research Institute (IRRI) training.

(112) CAVAC works closely with PDWRAMs for irrigation construction and maintenance, as follows:

- Initiating contacts with concerned communities and identifying potential land issues, in coordination with commune councils.
- PDWRAM prepares detailed designs of irrigation schemes, which are then financed by CAVAC (which assesses the feasibility of proposed schemes).
- CAVAC procures construction work with the involvement of PDWRAMs and MOWRAM.
- PDWRAM supervises construction (financially supported by the programme).
- CAVAC has supplied certain equipment to PDWRAMs to strengthen their design and supervision capacity.
- CAVAC collaborates with the heads of PCCs and provincial departments to solve various issues, such as land disputes, and with PDWRAM in Takeo on a water availability study.

(113) In the MTR's opinion CAVAC has engaged with government as constructively as can be expected for a programme of this nature in the Cambodian context. The issue that has coloured CAVAC-RGC relations is precedent: CAVAC differs markedly from the kind of initiative that AusAID has supported historically, particularly with regard to the role of RGC, and understanding of this new approach (ie making markets work for the poor) is limited. This has caused a dislocation between AusAID's new approach and RGC's expectations. With hindsight this dislocation might have been anticipated and more concerted measures taken to improve understanding of the new approach and manage expectations prior to CAVAC's inception.

²⁰ The MTR understands that AusAID has also used the policy support facility to support government initiatives directly, for example AUD1m will be provided to support Cambodia's first agricultural census (in conjunction with FAO).

5. THE FUTURE OF CAVAC

(114) This section relates to the MTR's third question: ***the opportunities CAVAC might present if extended.***

(115) In view of the programme's progress to date, projected impact and current momentum, the MTR believes that ***AusAID should consider extending the programme by eighteen months, to December 2015***, at a cost of approximately AUD13.7m. This would allow AusAID to significantly increase long-term impacts, thereby maximising its investment and increasing the overall value for money of the programme. An extension would:

- Enable CAVAC to include one additional cycle of irrigation construction, which would cover an additional 15,000ha approximately, representing about 9,000 additional households, with a rapid and tangible impact on volumes of rice production and the incomes of the affected farmers at very reasonable cost.
- Allow CAVAC to expand and considerably deepen the activities in agribusiness and extension, increasing sustainability and significantly expanding outreach in the target provinces and also in other provinces. There will be an opportunity to engage in additional activities to encourage non-partner firms to respond to competitive pressure and adopt innovations promoted by CAVAC into their own business models. These activities are likely to be in the 'wider markets' around input suppliers, and might include increasing companies' access to information about retailer training or linking firms to private or public support providers to improve their engagement with farmers. These types of activities would increase the likelihood that input suppliers not directly involved with CAVAC will copy business practices of those that are, with the commensurate increase in impacts among farmers and sustainability of new private sector behaviours. An extension would also allow CAVAC to deepen its activities in the media sector.
- Provide more time for measuring results, particularly in terms of farmer performance change. It would also permit monitoring of the extent to which CAVAC's work with specific partners influences other public and private players in Cambodia. Exploring these indirect results will help CAVAC to understand and document the full impacts of the programme.
- Allow CAVAC to synchronise with AusAID planning cycles (ie the country Delivery Strategy) and any potential second phase.

Recommendation 8: It is recommended that the programme period is extended by eighteen months. If AusAID feels an extension is warranted, this intention should be signalled clearly and in writing to the programme contractor by June 2012 to allow annual planning to be adjusted accordingly

(116) If AusAID is unable to make such a signal by that date then programme management will not factor the extension into its planning and intervention decisions. If that is the case, an extension would not deliver all the additional benefits described above.

(117) At a minimum, a six-month no-cost extension will be required to December 2014 to cover liabilities from canal construction in 2013.

(118) Finally, in view of the potential demonstrated by CAVAC, the MTR suggests that AusAID consider a second phase or follow-up programme to CAVAC. This would build on the current programme but expand its scope and coverage into more marginal agricultural areas (eg with less access to irrigation) and new value chains and support systems. An eighteen-month extension might be used to explore and prepare for this, but any preparatory tasks can only be accommodated if AusAID is able to send clear, early signals of its intentions to the programme. Any new programme should overlap with the current programme to ensure continuity of capacity and momentum. The MTR has provided some initial considerations to AusAID informally and separately from this document.

6. SUMMARY OF RECOMMENDATIONS

Recommendation 1:	It is recommended that CAVAC's management continues to pay close attention to the level of effort associated with current interventions and any new activities proposed, to avoid over-stretching the team and diluting intervention quality
Recommendation 2:	It is recommended that CAVAC continues to place monitoring and results measurement at the heart of programme management and operations
Recommendation 3:	It is recommended that CAVAC's management continues to develop its transition plans for key personnel and, if necessary, consider a backstopping arrangement to secure access to short term expertise
Recommendation 4:	It is recommended that Cambodian staff contracts are extended to the end of the programme phase and the transition of staff formerly contracted by ACIAR expedited without delay
Recommendation 5:	It is recommended that any future Team Leader is contracted by the programme's operational contractor and not AusAID
Recommendation 6:	It is recommended that the consequences of ACIAR's changed role with respect to CAVAC are communicated immediately to key stakeholders by AusAID, jointly with ACIAR
Recommendation 7:	It is recommended that the SMG's role with respect to CAVAC is streamlined in terms of scope, personnel and frequency, focusing on the achievement of annual milestones and the programme's strategic direction, agreed with AusAID and CAVAC
Recommendation 8:	It is recommended that the programme period is extended by eighteen months. If AusAID feels an extension is warranted, this intention should be signalled clearly and in writing to the programme contractor by June 2012 to allow annual planning to be adjusted accordingly