



CARE INTERNATIONAL IN VIETNAM



**Drought preparedness and mitigation
to support communities to
sustainably live with recurrent
droughts**

Final Project Evaluation Report

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- i. Evaluation work plan*
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LIST OF ACRONYMS

AEC	Agricultural Extension Centre
CBDRM	Community-based Disaster Risk Management
CIT	Commune Implementation Team
CPC	Commune People’s Committee
DARD	Department of Agriculture and Rural Development
DIPECHO	Disaster Prevention European Commissions Humanitarian Office
DMAP	Disaster Mitigation Action Plan
DoNRE	Department of Natural Resources and Environment
DPI	Department of Planning and Investment
DRR	Disaster Risk Reduction
FFS	Farmer Field School
FS	Feasibility Study
FU	Farmer’s Union
HCVA	Human Capability and Vulnerability Assessment
IDL	<i>theIDLgroup</i> Ltd
KAB	Knowledge, Attitudes and Behaviours
LF	Logical Framework
M&E	Monitoring and Evaluation
OFDA	Office of Disaster Assistance
PPO	Project Plan of Operation
SEDP	Socio-economic Development Plan
USAID	United States Agency for International Development
WU	Women’s Union
VND	Vietnam Dong

Executive Summary

The following report was prepared by *theIDLgroup* (IDL) consultants contracted to CARE International in Vietnam to conduct a final evaluation of the '*Drought preparedness and mitigation to support communities to sustainably live with recurrent droughts*' Project in Binh Dinh Province funded by USAID, US Office for Foreign Disaster Assistance (OFDA) and executed over a period of 20 months between September 2007-May 2009. This report is based on findings from fieldwork in the three project districts and communes (including control villages or communes) conducted from 7-14th May, 2009.

The evaluation team attempted to incorporate a mixture of qualitative and quantitative approaches in information collection. Meetings were held with key project partners and stakeholders from village, commune, district and provincial levels involving discussions regarding the relevance, efficiency, effectiveness, impact and sustainability of proposed objectives and activities detailed in the project's logical framework. Depending on the background of the project partners, slightly different techniques were employed ranging from discussions along a project timeline with village leaders to Strengths, Weaknesses and Lessons Learned Assessments with district and provincial level partners. Household surveys were also carried out and involved a mixture of quantitative and qualitative data collection. The evaluation team also examined various secondary sources of information including general socio-economic statistics provided by communes/districts as well as project activity and monitoring reports.

CARE endorsed a highly participatory approach in designing project activities and almost all stakeholders reported the interventions to be highly appropriate, relevant and responsive to the needs of poor and drought-vulnerable farming households within the project area. CARE as an organization, as well as the project team in Binh Dinh are to be praised for their efforts in working so closely with project partners and beneficiaries at the grassroots level for developing such an appropriate set of interventions. It would appear that such consultation has certainly assisted considerably in fostering clear mutual awareness and understanding of project activities and that this has served to facilitate the relatively smooth delivery of outputs to schedule.

Overall, despite the fact that the project was cut short by 4 months, CARE have been able to facilitate the successful completion of all of the intended project activities and all of the main outputs. Project staff and partners have had to work intensively in order to ensure delivery of the main outputs before the revised project completion date but this would indicate that the original concept was of roughly the right size and that the project has been managed efficiently with timely disbursement and delivery of outputs. The reduced project timeframe was the project's main constraints but it is understood that this is an issue largely beyond the control of CARE and the project implementation team, rather it would appear to be related to the donor funding cycle.

It would appear that the quality of the interventions was on the whole high and they were certainly well-appreciated by local farmers who were in the main provided with good training materials, received practical demonstrations and close/regular support from agricultural extension teams. This success is mainly to be attributed to the technical capacity and commitment of local partners such as the Animal Husbandry Centre, Agricultural Extension Centre and Veterinary Centre. CARE adopted a facilitative approach in project implementation, as opposed to one where the international NGO provided all the technical assistance. CARE only provided technical support in terms of participatory planning approaches and disaster risk reduction. The mobilization of appropriate local resources is to be viewed as a positive with CARE supporting local partners to deliver outputs. The approach has served to both support institutional development amongst government service providers and fosters a greater sense of local ownership and therefore an increased likelihood of sustainability. The high standard of the training and close support delivered to genuinely interested farmers has resulted in increased agricultural production

more or less across the board and consequently contributes to the overall goal of reducing local farmers vulnerability to recurrent drought.

The two biggest challenges of the project are the fact that the project was cut short and that no baseline was established. The former means that the majority of activities have only recently been completed and as a result it is a little early to be able to observe impacts, meanwhile the latter makes a quantitative assessment of project effectiveness and/or impact extremely difficult. Therefore, whilst the project activities were generally appropriate, relevant, well-organised and well-delivered, it is difficult to say to what extent it has genuinely reduced the vulnerability of poor farmers.

1. Background

1.1 Project Overview

CARE International received funding from USAID, OFDA to implement a regional three country Community Led Drought Mitigation Program between July 2006 – May 2009 in Cambodia, Timor-Leste and Vietnam. The program promotes community-based drought preparedness planning whilst also developing expertise in effective low-cost and innovative drought mitigation and preparedness technologies.

The Vietnam component was initiated in September 2007, is due to be closed at the end of May 2009 (20 month project), and covers 3 communes in 3 districts of Binh Dinh Province in Central Vietnam. The program goal is to enable poor households to sustainably live with recurrent drought and is to be achieved through outputs from activities within three intervention areas:

- 1. Capacity building on drought preparedness and mitigation and strengthened inter-operability through institutional linkages**
- 1. Livelihood improvement through efficient and sustainable use of limited resources and;**
- 2. Water and sanitation related activities on low cost water technology and usage.**

Fig. 1: Map of Binh Dinh Province



Binh Dinh is one of the poorest provinces in central Vietnam and tends to experience recurrent and prolonged dry periods that disrupt cropping; limit livestock productivity and threaten sustainable livelihoods. The risk of serious environmental damage, particularly through increased salt intrusion to the groundwater, vegetation loss and soil erosion has long term impact on the sustainability of provincial livelihoods. Water quality suffers and the aquifer reserves are also threatened through these processes – further impacting the ability of citizens to live with recurrent drought.

The project is comprised of three phases:

Phase 1 (originally 4 months), which entails program preparation, initial capacity building, awareness building, initiating institutional linkages and cooperation with beneficiaries.

Phase 2 (originally 18 months), which entails the implementation of alternative livelihood activities (diversifying agriculture, livestock care and vocational training), water tanks and filters and developing an drought mitigation action plan (DMAP) at the commune level on how to cope with recurrent drought, capacity building with lessons learnt through monitoring.

Phase 3 (originally 2 months) with evaluation, lessons learnt dissemination and hand over to DARD to replicate activities and closure.

This project phasing had to be abandoned at a relatively early stage in implementation due to problems associated with the donor funding cycle. This placed severe time constraints on the entire project, meaning that the project implementation team had to be well-organised and efficient just to be able to deliver the key activities within the remaining timeframe and that Phase 3 was seriously compromised. Given that these constraints are beyond the control of the project, CARE staff together with the local partners in Binh

Dinh have done extremely well to achieve what they have with a number of the main activities demonstrating excellent results and high potential for replication. Shortfalls or weaknesses associated with the project are almost entirely due to this reduced timeframe.

1.2 Overview of the Project Evaluation

IDL was selected to provide a team of two consultants (one national and one international) to conduct a final evaluation of the drought mitigation and preparedness project in Binh Dinh. This evaluation included 7 days fieldwork in Binh Dinh, from 7-14th May 2009. The purpose of the evaluation was to assess the outcomes of the activities indicated in the project logical framework and their subsequent contribution towards achieving the project's overall objective to enable poor households to live sustainably with recurrent drought. The evaluation was to consider:

- ✓ **Relevance / appropriateness** of the project design, to what extent the project is suited to the particular needs, expectations and priorities of the target communities, local authority, implementing partners and the donor
- ✓ **Efficiency** in use of resources, to what extent the project used the resources in the most economical manner to achieve its objectives
- ✓ **Effectiveness** and quality of project interventions, did the activities achieve satisfactory results in relation to stated objectives.
- ✓ **Impact**, are the results of the intervention - intended and unintended, positive and negative - including the social, economic, environmental effects on individuals, communities and institutions.
- ✓ **Sustainability**, are the activities and their impact likely to continue when external support is withdrawn, and will it be more widely replicated or adapted

The following sections of the report elaborate how a methodology was developed to incorporate the above aspects of the evaluation whilst at the same time remain participatory in nature. The subsequent 'evaluation findings' section is also structured around these five key criteria.

2. Description of Methodologies

The evaluation team studied project documents and reports in addition to undertaking a field mission which consisted principally of discussions with project beneficiaries, partners and stakeholders, mainly revealing qualitative information about project successes, weaknesses and lessons learned. However, household surveys were also conducted to collect a certain amount of quantitative data. Slightly different approaches were taken at the meetings with different beneficiaries, partners and stakeholders depending on their levels of capacity, involvement and understanding of project interventions. Household surveys were conducted both with project beneficiaries in target communes as well as with control groups comprised of neighbouring communes. This was deemed necessary in an attempt to provide greater rigor with regard to the evaluation given the absence of any baseline datasets.

2.1 Desk Review of Project Outputs

A preliminary step in any project evaluation is to study information contained in project documents. The evaluation team did this, including a desk-based review of the:

- ✓ **Original Project Proposal to USAID**
- ✓ **Project Logical Framework (LF)**
- ✓ **Feasibility Study (FS)**
- ✓ **The Project Plan of Operation (PPO)**
- ✓ **Project Budget/Financial Monitoring Forms**
- ✓ **Project Activity Reports**
- ✓ **Project Quarterly and Annual Reports**

The information contained in these reports allowed the team to build up a good understanding of the project's objectives, components, and specific activities as well as an indication of how the project was designed, what alterations or refinements were made, how the money was spent, how partners were involved in project coordination/implementation (institutional arrangements), key issues affecting implementation and specific outputs and/or results/impacts of particular activities.

The review of these documents helped the team to identify the information needed from beneficiaries and stakeholders in order to objectively verify the satisfactory completion of project outputs as well as what the processes were in getting there and the outcomes or impacts of those activities as measured against the intended project purpose and goals.

2.2 Meetings with Project Partners

The project included a number of components (and sub-components) and as a consequence worked with different government departments and line agencies and mass organizations from village, commune, district and provincial levels. The team consulted project partners at all levels within the scope of the evaluation mission with the approach differing slightly according to time available, their role and involvement in particular project components and levels of capacity and understanding of project planning and management.

2.2.1 Village Leader Group Discussion

The evaluation included a group discussion with village leaders (of villages involved in the project) in My Phong commune. In this meeting, we adopted a project timeline discussion approach, whereby the village leaders led us through the different activities they were involved in, in chronological order. This approach was adopted since in our experience, leaders of poor rural villages in Vietnam often lack the ability to properly conceptualise project plans, components and logical frameworks. By using a project timeline, we were then able to create a kind of simple semi-structured group interview, asking relevant questions pertaining to their impressions of project appropriateness to local needs, efficiency, effectiveness, impact and sustainability. In hindsight, this was actually a very informative discussion and should perhaps have been repeated in all three project communes. However due to time constraints, this was not possible and in any case the project was implemented in such a way that activities were implemented at all project villages along a similar timeline and with the same institutional framework (only some small differences in specific agricultural models piloted in specific villages).

2.2.2 Commune Implementation Team (CIT) Meetings

The evaluation team met with the CIT and other Commune People's Committee (CPC) staff in each of the project communes. The approach taken during these meetings was to get all participants to introduce themselves and their role in the project and provide some general comments on the overall successes and problems with the evaluation team drawing out further information on specific activity areas or project components where necessary. The meetings started in this way in order to try and encourage participation and give people the confidence to step forward with ideas and information.

Following these initial comments and introductions an adapted Strengths, Weaknesses, Opportunities and Threats (SWOT) exercise was carried out using coloured cards to pin-up participants ideas. The approach was slightly amended due to time constraints with 'Opportunities and Threats' combined as 'Lessons Learned' so a participant could provide a statement on something that worked well and showed high potential for replication or development or something which didn't work so well and from which lessons were learned. Once all the ideas were pinned up, the evaluation team discussed the suggestions to make sure that all comments were relevant and properly understood trying where possible to draw out further comments. The CIT was the main body responsible for developing project components and implementing activities. This group also received training from CARE and the Red Cross on facilitation and participatory planning and therefore were in a position to understand the project's wider objectives and different components. Participants were also presented with a questionnaire to be completed individually.

2.2.3 District Level Partners

The evaluation team met with project partners at the district level i.e. District Agricultural Extension Centre, Animal Husbandry, Agricultural Department or other relevant staff under Department for Agriculture and Rural Development (DARD), Farmer's Union (FU) and Women's Union (WU) leaders and representatives. The format for these meetings was essentially the same as at the Commune level. Although district level staff were not so instrumental in the design and implementation of project interventions, they would have been well-informed about key objectives and activities and have sufficient capacity to be able to understand project planning, components and activity areas.

2.2.4 Provincial Level Partners

Meetings at the provincial level were generally shorter and less structured. The purpose of the meetings with Provincial DARD, Rural Water Supply and Sanitation sub-department and WU were quite general and effectively to understand coordination, oversight of key results and the potential for sustainability through uptake and replication. Meetings were also held with the Provincial Agricultural Extension and Animal

Husbandry Centres. These institutions acted as technical service providers for the project and the opportunity was taken to discuss in detail the agricultural models piloted by the project and to gain an understanding of what worked, what didn't and why.

2.3 Household Interviews

Household interviews were conducted with 60 farmers involved in the project as demonstration farmers, members of interest groups or selected from villages supported by the project, and 60 farmers outside the project area (i.e. from neighbouring villages and communes not supported by the project) so as to create a control group. In total 87 men and 32 women were interviewed¹.

The purpose of such interviews was to try and gather quantitative information in order to assess project effectiveness and impact in relation to the project's overall objective to enable local farmers to live sustainably with drought – had yields increased, incomes diversified and improved, food security issues diminished etc. In fact due to the lack of a project baseline scenario this proved to be very difficult and therefore the questionnaire also incorporated further qualitative information to try and help with gaining an accurate picture of project impact at grassroots level. The lack of a baseline is one of the main shortcomings of this project and has made the job of evaluating impacts in quantitative terms difficult. The inclusion of household interviews in non-project communes and/or villages was intended as a measure to try and add an element of greater rigor. For example when questioning about incomes, yields and reduced vulnerability farmers were asked about current annual incomes as well as pre-project estimates. This is not really a very accurate method and therefore comparison with control groups' incomes would help to provide a slightly better idea of project impact.

2.4 CARE International in Vietnam (CVN) Project Staff

The evaluation team also spent plenty of time with CARE International project staff gathering their ideas and comments on their successes and failures. All staff were extremely cooperative, open and honest and able to put forward objective suggestions on successes and failures. We are extremely grateful to Nguyen Van Bang and his team for their attitude and helpfulness.

¹ The intention was interview 60 people in the project area and 60 in the control commune and in order to save time interviews were conducted at the commune centre. One person did not turn up for the interview in Phong My District control group.

3. Evaluation Findings

3.1 Project Design & Relevance

3.1.1 Defining Drought in the Project Area

Drought is a notoriously difficult and subjective term to define. In general drought is characterized by a deficiency of precipitation over an extended period of time, usually a season or more. This deficiency results in a water shortage for some activity, group, or environmental sector. Authorities in Binh Dinh appear to define drought as being when rainfall falls below 30mm/week, which is not an extended period of time with no apparent definition of the number of successive weeks falling below 30mm which would then constitute a drought. This is not to suggest that Binh Dinh does not experience drought and indeed recent climate change studies appear to suggest that the South Central Coast region is increasingly experiencing lengthier dry seasons.

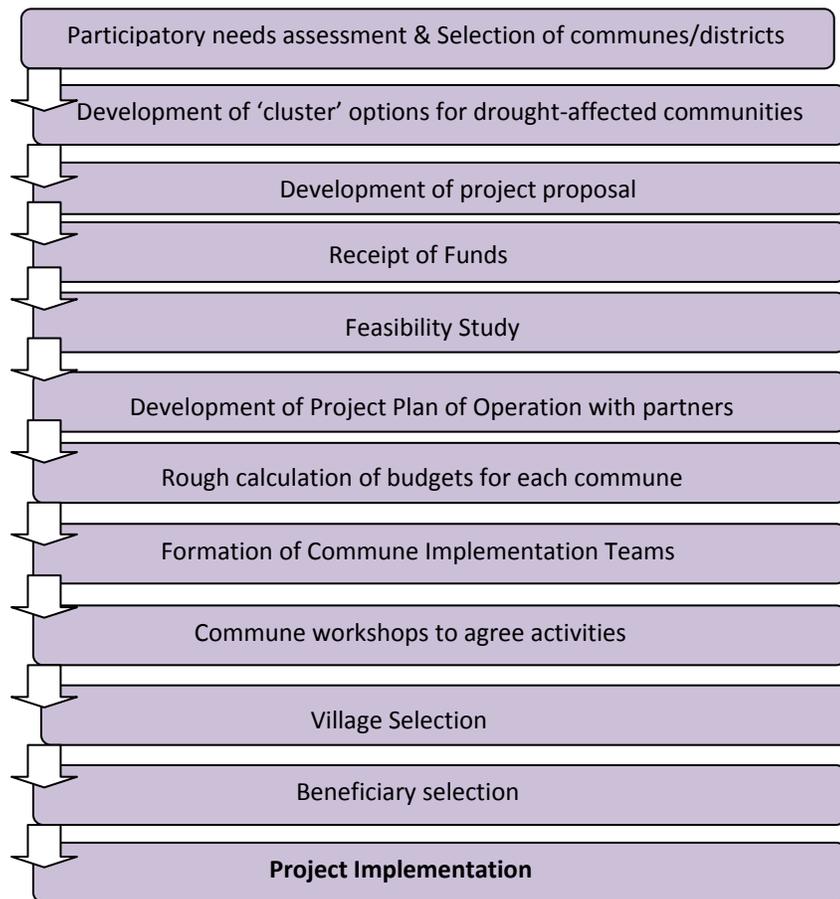
The project may however have benefitted from a clearer definition of drought at the project site level. Although the feasibility study did indeed carry out some participatory analysis of some of the effects of drought or reduced rainfall, little scientific evidence or measurement of specific variables such as topsoil moisture content, subsoil moisture content, soil-water deficits, levels of evapo-transpiration, groundwater/reservoir levels etc was ever taken. This kind of analysis both would have created a much more accurate picture of the project's drought situation and therefore the necessary solutions and would also have provided benchmarks or baselines for measuring project progress eg. despite lower rainfall rising groundwater storage levels may indicate improved water conservation strategies. This would have entailed working with different project partners such as the Department of Natural Resources and the Environment (DoNRE) in supporting project design, monitoring and evaluation. DoNRE collects information on groundwater storage, aquifers, rainfall and is also responsible for land use classification and monitoring. A more comprehensive project preparation would have included consultation with DoNRE and this may have affected site selection.

3.1.2 The Participatory Design Process

In spite of the fact that there is a case for the involvement of DoNRE, the evaluation team generally found the project design process to be highly participatory and that overall CARE and their project partners are to be commended for this. Lessons learned and results from ongoing collaboration with project partners since 2004 as part of the Community-based Disaster Preparedness European Community Humanitarian Aid Department (DIPECHO) project also fed into the design process. It would appear that such close consultation resulted in a good mutual understanding of objectives, the selection of extremely appropriate activities and a clear sense of localized ownership of project outputs and results. Fig 2 overleaf illustrates the participatory design process.

One of the biggest strengths of the project was the time spent in designing the project very closely with local stakeholders and beneficiaries. Once CARE had secured the funding for the project, the final decision on which activities or project components to operate within each commune rested with the Commune Implementation Team (CIT). The CIT themselves consisted of relevant commune level government staff and commune level mass organization leaders/representatives (Farmer's Union and Women's Union), thus project components and activities were in line with existing local needs and priorities. Questionnaires completed by commune and district stakeholders during this evaluation found that 78% of respondents felt that interventions were highly appropriate (the remainder felt they were 'mostly appropriate but some small activities did not contribute much to the overall goal').

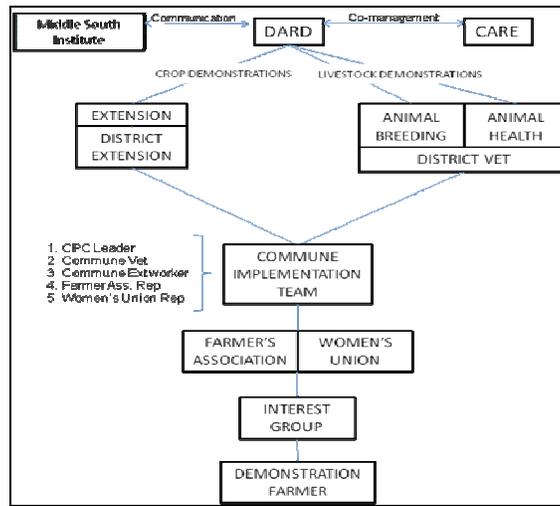
Fig 2: Participatory Design Process



This endogenous approach also clearly assisted in developing a very suitable project implementation and coordination mechanism, entirely compatible with the structure of local government and extension services. The fact that the project operated with a familiar coordination mechanism meant there was an inherent level of understanding of people's roles and responsibilities allowing for relatively smooth and efficient implementation.

The project would not have been able to achieve nearly so much were it not for this implementation structure, especially given the short time frame of the project. CARE themselves actually provided very little (if any) technical guidance to the project and principally acted as facilitators. The evaluation team found this to be an extremely effective approach, solidifying local ownership of the project and at the same time supporting partners to implement locally appropriate interventions aligned with government plans. Through the Farmer Field School approach, partners also had the opportunity to build their own capacity in terms of pro-poor service delivery methods.

Fig 3: Project Implementation Structure



3.1.3 Project Size, Scope & Timeframe

All project partners/stakeholders clearly agreed with CARE’s idea to cover a range of different components despite the relatively small size of the budget. In discussions with beneficiaries, partners and stakeholders during the final evaluation mission, participants were repeatedly asked whether the project was in fact too broad in scope and that it should perhaps have simply concentrated just on agricultural models (for example). However, in almost all cases stakeholders did not want to sacrifice any of the project components.

Although there were certain problems in implementing particular activities or components as will be discussed later on, although there may be some issues with the logical framework and the appropriateness of objectives and indicators, the project components were designed quite appropriately, spreading the money across the three component areas. Certainly the partners and beneficiaries felt this to be fair and appropriate and it is very difficult to argue with the beneficiaries if they are very satisfied with the relative size, scope and breakdown of the project components. The number of activities appears to be about right since although it has clearly been a rush and some activities have not been carried out at the ideal time due to the project’s early closure, most outputs have been delivered.

The key point to make here is that the project appears to have been designed appropriately considering the donors preference for supporting short term humanitarian assistance. Certain problems with the donor cycle however meant that ultimately the project had to be completed in a shorter timeframe than in the design, thus meaning that in terms of implementation the timeframe became a problem.

Additionally, it is the opinion of the evaluation team that there appears to be a slight disconnect between project expectations and the stated objective. The objective is to ‘enable poor farmers to live sustainably with recurrent drought’, whilst the project components focus on the delivery of immediate benefits. Whilst there is nothing wrong with providing short term humanitarian assistance, the achievement of the stated objective would really require a longer project timeframe and a more holistic approach so as to address the underlying causes of drought more effectively.

The evaluation team can conclude that the project components on the whole have been delivered effectively and have genuinely had an impact in terms of reducing vulnerability to drought and, as shall be documented in this report, even demonstrated potential for wider impact and sustainability of

interventions. Because the project never intended to look at underlying causes, the scope of the project meant that the achievement of the overall objective could only ever be partial. The evaluation team recognizes that this observation can either be interpreted as ‘semantics’ (in terms of precise definitions of objectives) and therefore slightly irrelevant or that it may provoke consideration of the project scope and timeframe i.e. whether to provide short-term humanitarian assistance or longer term support towards addressing the issue of drought mitigation and disaster risk reduction in a more comprehensive manner and in a way that attempts to tackle the root causes of water shortages. The evaluation team would hope that the latter would be preferred in future, whilst recognizing that there is a need for certain short term deliverables and gains.

3.1.4 Monitoring & Evaluation Framework

Monitoring and evaluation (M&E) were clearly considered seriously during the design phase of the project with numerous methods for monitoring of activities, outputs and impacts outlined within the original proposal as well as other project documents such as the Project Plan of Operation. The project possessed a logical framework and this provided the basis for monitoring.

The main issue regarding the M&E framework was the lack of any set of baseline or mid-term data sets to be able to measure project effectiveness and impact against. In fact the original proposal and early project documents included baseline and mid-term surveys against key indicators such as household incomes. Therefore in terms of project design, it would appear that the project was fairly well designed with adequate thought paid to impact evaluation. The project’s reduced timeframe meant that a mid-term assessment would not really be essential (and not a requirement for the donor in any case), however a baseline assessment should have been carried out. To their credit the project implementation team has however prioritised delivering project outputs and direct investment to the target beneficiaries against serious time constraints.

Another issue concerning the M&E framework was the completeness of the logical framework or rather that it is the opinion of the evaluation team that a more complete or broader selection of quantitative indicators of achievement of the project’s underlying objective (outcome monitoring) could have been chosen. As it was the project only chose two income-based quantifiable indicators and one related to health. However, since the project’s goal was to enable poor farmers to *sustainably live* with drought, there are therefore numerous aspects to *sustainable livelihoods* including people’s access to natural, human, social, physical and financial capital, improvements to the enabling environment or the changing structures and processes as well as people’s abilities to cope with various shocks and trends. Thus it would seem that the existing set of indicators would be insufficient to be able to measure progress against the objective. Other indicators might have included number of sources of income, number of months of hunger, agricultural yields, soil fertility, measurements of knowledge, attitudes and behavior (KAB). As it is, since no baseline data or mid-term data was ever collected in any case, this is something of a mute point. It is also likely that if a baseline survey had been undertaken it would also have helped to define which further indicators should be considered.

Otherwise the mechanisms for monitoring of activities and outputs appear to be fine, mostly considered within the project reporting framework i.e. quarterly and annual reports as well as specific activity completion reports. These reports documented output indicators such as number of training courses delivered, Disaster Mitigation Action Plans (DMAPs) completed or number of clean water systems installed. It should also be noted that CARE project staff also conducted regular but casual/informal qualitative monitoring through discussions and deep interviews with beneficiaries and stakeholders. Findings would be presented internally as ‘Field Notes’ and issues of importance arising from these discussions or

interviews could then be discussed at the following monthly meeting with project partners. For a project of this size and scope and given the resources available, the evaluation team considers this to be sufficient participatory monitoring.

3.2 Efficiency

Overall the project appeared to be well-managed with the efficient and timely delivery of outputs roughly according to schedule. The project was planned to be implemented over a period of two years but was cut short to 20 months due to the donor funding cycle. With this in mind, the field team in Quy Nhon has done extremely well to be able to mobilize the partners in order that all direct investment to beneficiaries was delivered and all project outputs delivered before the end of the project.

3.2.1 Implementation of Activities and Delivery of Outputs

Table 1 below illustrates the timely delivery of almost all project outputs despite a small delay in project start up as well as the fact that the project time was reduced by 4 months in order to complete the project in accordance with the donor funding cycle.

Table 1: Project Component Activities

Activities		Expected Results	Status
1.	Drought Mitigation Action Planning & Capacity Building		
1.1	DIPECHO Lesson-learning workshop and training in CBDRM/Drought mitigation action planning	3 communes	Completed
1.2	Establish Commune Implementation Team	3 communes	Completed
1.3	Assessment of Drought Situation	3 communes	Completed
1.4	Training courses on facilitation skills and CBDRM planning for inter-operability/institutional framework for drought mitigation activities	3 communes	Completed
1.5	Community Action Planning Workshop on Drought Mitigation	3 communes	Completed
1.6	DMAPs submitted to district for approval	3 communes	Completed and DMAPs read by ET
1.7	Action Plan Dissemination Workshop	3 communes	Completed
1.8	DARD staff to visit Quang Ngai Rural Disaster Mitigation Project	Provincial and district staff	Completed (19 staff)
1.9	GIS training for DARD staff in drought-tracking	Provincial and district staff	Not carried out. DARD did not have software. Not a major issue affecting project delivery.
2.	Livelihoods		
2.1	Local needs assessment		Completed
2.2	Awareness workshop – drought mitigation activities, water efficient agriculture	10-15/HH/commune	Completed
2.3	Development of IEC materials for water-efficient agriculture	10-15 HH/commune	Completed and seen/read by the ET
2.4	Selection of beneficiaries	10-15 HH/commune	Completed
2.5	Sustainable Agriculture models	30-40 HHs/commune	Completed
2.5.1	Rice models	97 HH/commune	Completed (exceeded number of target hh)
2.5.2	Groundnut	40HH/commune	Completed (35 hh)
2.5.3	Chili	5-10 HH/commune	Completed (9 hh)
2.5.4	Sesame	5-10 hh/commune	Completed (23 hh)
2.5.5	Maize	5-10 HH/commune (upland only)	Completed (14 hh)
2.5.6	Organic compost pit	5 HH/commune	Status Unknown to ET
2.5.7	General Training in Support of Agriculture and Livelihoods		Completed
2.6	Livestock Models		
2.6.1	Livestock care training courses (cow, pig, chicken)	Commune level	Completed

2.6.2	Livestock care training courses (goats)	Commune level	Completed
2.6.3	Cow/fodder model	21 HH	Completed
2.6.4	Pig/Foreign sow model	20 HH (Canh Vinh and Phuoc Thuan)	Completed
2.6.5	Pig/Mongcai sow model	10 HH – My Phong	Completed
2.6.6	Chicken model	10 HH/commune	Completed
2.6.7	Goat model	2 male goats/2 villages (Canh Vinh)	Completed
2.6.8	Vetinary training	Commune level	Completed
2.7	Supporting Training & IEC materials	All communes	Completed
3.	Clean Water Supply & Sanitation		
3.1	Water Needs Assessment		Completed
3.1	Provide filters for village headquarter, households	270 HH	Completed
3.2	Provide filters for village headquarter	9 villages	Completed
3.3	Provide filters for kindergardens	26 filters	Completed
3.4	Provide filters for schools	54 filters	Completed
3.5	Provide large water contain (inox) for clinics	2 clinics	Completed
3.6	Provide large water contain (inox) for schools	5 schools	Completed
3.7	Provide filter machines for clinic	1 machine	Completed
3.8	Provide filter machines for school	5 machines	Completed
3.9	Building clean water system for schools	1 system	Completed
3.10	Building clean water system for communes	3 systems	Completed
3.11	Building clean water system for kindegarden and units	3 systems	Completed
3.12	Building filter and clean water system for schools	2 systems/schools	Completed
3.13	Building toilet for schools	1 toilet/school	Not carried out – not related to drought security
3.14	Provide waste treatment system for clinics	1 system/1 clinic	Completed
3.15	Broadcasting community raising awareness on using clean water, clean environment	60pp/2 classes/3 communes	Completed

3.2.2 Financial Disbursement

The project funds appear to have been utilized appropriately and largely in line with the budget agreed with the donor. The major problem affecting financial disbursement has been the reduced timeframe of the project, meaning that the project has necessarily had to spend quickly towards the end in order to get physical items installed or activities completed. All project funding for direct investment in beneficiary communities has been utilized and what remains is scheduled to be spent before the end of the project whereas the principal underutilization occurs under the staff and consultants budget lines – unsurprising for a project which was initially planned to be four months longer.

4.3 Effectiveness & Impact

The evaluators recognise that there is a subtle difference between project effectiveness and project impact however they will be considered in tandem in this section. The reason for this is that there is a natural progression from discussing whether particular activities were effectively implemented (eg. training courses delivered with practical demonstrations, high quality training materials and good support from extension workers and technical specialists) to discussing whether this made any difference in terms of the stated objective i.e. has the well-delivered training in agricultural models actually resulted in improved livelihoods and reduced vulnerability of poor farmers in Binh Dinh. In this section, the results of each of the project components is discussed based on findings from meetings, interviews and questionnaires in the field.

4.3.1 Component 1 - Drought Mitigation Action Planning & Capacity Building

The development of DMAPs and associated capacity building was a core component of the Binh Dinh project and intended to support a number of objectives ranging from the physical creation of the DMAP itself and building capacity for local level participatory planning to increase project beneficiaries' ability to conserve and sustainably use water (objectives identified in the reporting framework).

DMAPs were developed for each of the three project communes by September 2008 (with Phuoc Thuan commune's plan completed in March 2008, Canh Vinh completed in May 2008, and My Phong completed at the end of August 2008). The planning period for each of these DMAPs was three years but to be reviewed annually. The first review is supposed to be in September 2009, which would have been the end of the project as originally planned.

The process of developing these plans for each of the communes was found to be quite rigorous and led by the CITs with training in facilitation for project planning as well as community-based disaster risk mitigation (CBDRM) delivered by the Vietnam Red Cross to 119 trainees from CITs, and representatives from district level DARD, FU, and WU. Following training, CITs were able to conduct village meetings, a Human Capability and Vulnerability Assessment (HCVA) including group discussions with farmers and local leaders to evaluate the strengths, weaknesses of local resources to be able to cope with drought situation and a participatory evaluation of local needs. A review workshop was then held to approve the assessment and proposed solutions and a final commune workshop was held to finalise the DMAP with guidance and support from CARE project staff and DARD consultants. The process also specifically targeted vulnerable groups through the creation of working groups representing the needs of women, children and elderly. Once the DMAP had been finalized at the commune level it was then sent up to District level for review and approval. Once again this highly participatory planning process is to be praised and based on meetings with relevant parties at all levels from district down to village level, it would appear that there is a high level of awareness and understanding about the contents of the DMAPs, that they are unanimously agreed and there is a high level of localized ownership of the process and the resulting output.

The evaluation team has also examined the contents of the DMAPs and found that they are appropriate with local reality and include various measures such as activities for the uptake of drought-resistant agricultural models, local water supply installations, awareness activities and aspects of socio-economic development planning. The list of activities in the DMAPs have been presented clearly. This component can largely be viewed as a positive success since it is through the high level of ownership of results from this process that sustainability and impact are more likely to be achieved.

District level budgets are of course tight, especially with Binh Dinh being one of the region's poorest provinces and this places an added pressure to make sure that what money there is, is used effectively, and for prioritized needs. The DMAPs do in fact appear to go beyond just drought mitigation planning into broader socio-economic development planning. Discussions with district and even provincial authorities revealed that the DMAPs will assist in justifying the allocation of budgets towards prioritized needs as identified in the plans. For the time being the DMAPs are additional to commune and district development plans and are not formally integrated, although since this was effectively the first time these communes adopted a participatory planning process, commune leaders suggested that certain activities within the DMAPs may make it on to the SEDP. As a process, the project adopted a planning approach which is highly congruent with the government's decentralized decision-making policy, the Grassroots Democracy Decree, by facilitating greater participation and with the mass organizations playing an important role in securing that participation as members of the CITs. The project has effectively facilitated the piloting of a model approach towards planning and if this process is not followed exactly in the future with other planning processes such as the SEDP itself, then indications are that elements of a more participatory approach will remain.

Another point worth mentioning here is that the project should be praised for the timing of the DMAPs i.e. the planning cycle for each of the plans sees them up for review in August each year, this being an extremely appropriate time of year for the preparation of socio-economic development budgets at district and provincial levels. Thus the DMAP review would present an opportunity for a project commune to develop a small proposal to the district level focusing on needs prioritized in the DMAP.

The future utility and sustainability of the DMAP is considerably dependent on its ability to be continually integrated into socio-economic development and financial planning. Unfortunately, due to the premature closure of the project, it was not possible for the project to assist with the DMAP review process one year on and therefore offer a further opportunity for consolidating capacity-building at the commune-district level in prioritizing activities and allocating budgets. It also makes it difficult to assess whether the project has had an impact in terms of altering other planning processes such as the SEDP – around August /September 2009, the communes will begin their socio-economic development planning processes for the first time since the completion of their DMAPs.

It was felt that although districts have approved the DMAPs, the project may have had greater impact and success if the participatory DMAPs had been better integrated with government plans and programmes. Various government programmes provide investment for drought mitigation and preparedness relevant activities including the 661 programme which supports reforestation and protection of important forested watersheds and 135 programme which provides rural infrastructure including irrigation canals, pumps etc. There was no real attempt by the project to engage with wider government planning processes in this way, meaning that the plans rather stand out on their own (and are much less important). What may have been more effective would be to effectively mainstream drought (or even disaster) mitigation within the commune development plan. However, once again this would have been much easier at the end of the first year of implementation review stage i.e. August 2009.

It was noted that one of the indicators in the project logframe was the number of DMAPs produced for other non-project communes. There has been no replication of the DMAP process with other communes

and in this respect the project has not been successful in achieving wider replication so far. Once again the premature closure of the project has affected this but even so this was probably an unrealistic indicator even by the anticipated September 2009 closure.

In terms of the component objectives table 2 below summarises some of the main points regarding the project's effectiveness, impact and sustainability with regard to component 1. Overall the evaluation team feels that this has been a successful project component and it is a significant achievement that the DMAPs have been approved at the district levels for the project communes. It has introduced appropriate model concepts of participatory planning, built the capacity of authorities and civil society stakeholders to implement such approaches and the benefits of which appear to be appreciated by local authorities. As a result there is a higher likelihood of more participatory forms of planning and decision-making in the future. The expectation that the DMAPs would be replicated elsewhere was a little ambitious within such a short project timeframe. Perhaps, the only really negative associated with this component, was that the premature project closure meant there was no opportunity for consolidating capacity-building, and the limited opportunity for better linking or integrating DMAPs with commune development plans.

Table 2: Summary of Component 1 Effectiveness, Impact and Sustainability

	Goal/Objective	Effectiveness	Impact	Sustainability
1	Physically create a Drought Mitigation Action Plan (DMAP) for the project communes	Yes, highly effective. 3 DMAPs completed.	Not really possible to tell. The DMAPs included project activities as well as those beyond the scope of the project therefore the real impact of the DMAPs can only be seen after the allocation of budgets during year 2 of implementation.	The communes may have the capability to repeat the process, although sustainability would have been better assured by further support in second year review. The sustainability of the DMAPs is also linked to the level to which they form part of the commune development plans – at present they are not formally integrated and this will also jeopardize their sustainability.
2	Build capacity among local stakeholders and project partners to understand and manage vulnerability to impacts of drought	Yes, effective. Local project partners appear to understand certain drought mitigation measures.	Moderate positive impact. The project has increased awareness of participatory planning and some aspects of drought mitigation but certain aspects of drought and partners not considered in design and implementation of both the project and the DMAPs, in particular how water is used and measures to improve water resource management.	As far as the project went the changes are probably sustainable but a greater understanding of drought impacts and vulnerability is probably required.
3	Strengthen the capacities of institutions to make gender-sensitive decisions in planning, implementing and managing activities	Yes, effective. The DMAP development process was highly participatory, involving the participation of women and other vulnerable groups. Such institutions had not previously engaged in such a process for development planning.	Positive impact in terms of ensuring a high level of participation from women during project planning and implementation.	The continued involvement of women in development planning and project implementation is probably sustainable given the enthusiasm of the WU to replicate models and activities.
4	Build confidence to sustainably live with recurrent droughts	Effective due to increased capacity of commune staff and farmers.	The fact that there is now a plan in place which is based on local needs has increased the confidence of communities that certain measures will be taken to improve livelihoods in response to drought conditions.	Sustainability depends on the realization of activities within the DMAPs. Some activities have taken place under the project but beyond the project lifespan, this will depend on the integration of DMAPs with development plans and is threatened by the project's early closure and the lack of an opportunity for follow-up, review and re-planning within the project.
5	Increase project beneficiaries ability to conserve and sustainably use water	Moderate effect. Sustainable use of water is not a major focus of the DMAPs but this objective may be partially achieved through the	Impossible to measure the impact as no baseline was taken and there was no quantitative analysis of water consumption/use and/or groundwater	None, in fact the project has been successful in connecting more people to the water supply so it is likely that

		inclusion of agricultural techniques that require less water.	storage levels.	consumption/use will increase.
6	Increase the potential for participatory planning between government agencies and civil society groups to develop and implement drought mitigation strategies and actions	Yes, effective. The process had not been carried out previously in the project communes. The project therefore demonstrated the potential of participatory planning.	The impact is a visible level of ownership of and involvement in planned development interventions.	The potential for participatory planning has increased but sustainability is still constrained by budgets as well as the lack of integration with other government plans and programmes.

4.3.2 Component 2 - Livelihoods

The major focus of the project was component 2, and this chiefly included attempts to improve the livelihoods of local farmers by increasing yields and incomes to offset or mitigate the impacts of drought on their daily lives. This component was divided into three sub-components:

1. Improving livelihoods through water efficient agriculture and crop systems
2. Improving livelihoods through improved animal husbandry and livestock systems
3. Improving livelihoods through vocational training and the creation of alternative sources of off-farm incomes

Sub-components 1 and 2 were delivered using a Farmer Field School (FFS) approach. This method of project/service delivery effectively begins during the participatory design process whereby the farming community discusses appropriate and relevant production knowledge and technology needs and selects proposed models. In this case various models were presented by the provincial agricultural extension centre and animal husbandry centre. The community then selects which models it is interested in piloting and this explains some of the differences in the models at the different project communes/sites as will be seen below. Subsequently 'interest groups' are formed according to the individual farmer's interests in the specific models. Within these interest groups, key demonstration farmers and beneficiaries are selected. Key farmers are usually those with sufficient land, resources or access to other forms of capital so as to be able to take the risks associated with piloting new techniques (eg crop failure). As such they are often slightly richer households in the community. Certain models in this project placed conditionalities on demonstration farmers eg the cattle fodder model stipulated that a farmer must have at least 2 cows already and sufficient land on which to grow the elephant grass. Other variables such as the location of someone's plot of land, their abilities as a respected individual and farmer within the community would also be considerations in choosing the appropriate demonstration farmers. The most important thing is that the group agrees and elects the demonstration farmers. Through delivering production knowledge and capacity transfer using just a handful of demonstration farmers for each model, the project has chosen a highly efficient method for reaching the maximum number of farmers with minimal financial resources.

Interest groups then receive training and materials at the relevant times of the agricultural calendar according to the land preparation, sowing/planting, fertilizer/pesticide application, harvesting and in some cases post-harvest processing and storage regimes of the particular models. This means that the farmers receive close support from the project team, technical consultants where appropriate and extension staff right through the season. The case study of Mr Dieu below illustrates a typical example where training and materials are delivered right before the relevant activity and regular field visits are made to his site to check on progress. The rest of the interest group then participate in the trainings both in the classroom at the commune centre as well as observing the techniques first hand at practical demonstrations on the demonstration farmer's land. Participants are then able to put the new knowledge into action straight away. The normal delivery of agricultural extension trainings is by classroom alone, with no practical demonstrations and often farmers have difficulty in remembering the techniques or make mistakes.

The FFS approach was highly appreciated by the farmers in the project area who were very appreciative of the good quality of materials and training provided. FFS is recognized by the evaluation team as an extremely appropriate way in which to transfer knowledge and technology with limited funds and resources and with a view to maximizing impact. The OFDA project therefore appeared to implement the FFS approach effectively. The evaluation team did receive some concerns both from local farmers and provincial level line agencies that in some cases the capacity of the local extension staff and/or key farmers may not be enough to ensure the sustainability of knowledge transfer. There has also not been any uptake of the FFS approach beyond the scope of the project as yet. Although these are important points to

recognize and consider for future planning and implementation of agricultural livelihoods components, overall the evaluation team felt that participation in the models was high, production knowledge in new water efficient agricultural techniques and cropping systems had certainly improved significantly and that the new models were being taken up already by farmers neighbouring the demonstration plots. Thus, as an approach it has generally been effective, is demonstrating some important impacts for the beneficiaries and shows some potential for ensuring the sustainability of the models – thus generally very successful and an appropriate modality for future replication within the context of reducing drought vulnerability through improved/water efficient agriculture and livestock production.

Agriculture

The agricultural extension component of the project introduced a number of demonstration models aiming to improve production knowledge and techniques in order to better equip poor farmers for coping with conditions of drought and thereby reduce vulnerability through improved yields, incomes and food security.

The most fundamental change in production techniques initiated by the project involved adapting the agricultural seasonal calendar to cope with the drought period generally occurring between June-August i.e. either by changing from a 3 rice crop production model to the growth of two rice crops in the Winter-Spring (wet rice) and dry rice production Spring-Summer with a cash crop grown during the summer season or by introducing or improving the growth of drought-resistant cash crops in the summer where previously only two rice crops were grown.

The models attempted to increase rice production during the rice crop periods in order to meet household needs and improve incomes pre-drought, as well as provide a valuable and viable source of income to farmers during the drought period. In this way, poor households have a steadier flow of income throughout the year (especially during the drought season) and have access to financial capital which can be transferred into other forms of capital to improve livelihoods or else provides a more substantial safety net during times of shortfall. Farmers and communities should be better able to eat properly or afford necessary health care in order to mitigate the impacts of drought. Thus they should be less vulnerable to shocks such as extended drought and the apparent trend of increasing occurrence of droughts. It should be noted that in many cases farmers already grew the crops covered by the demonstration models (rice, chili, sesame, corn, and peanut). So farmers did not necessarily diversify their incomes *in absolute terms*, however by changing the cropping regime and converting to drought-resistant varieties and/or technologies they would experience an important *seasonal diversification of income*.

Rice Production

New varieties of dry rice were piloted in the upland communes of My Phong and Canh Vinh, with demonstration farmers switching from OMCS 96 to ML202 for the Winter/Spring crop and VD8 for the summer crop. In addition to altering the planting regime, the models also provided training on the use of fertilizers, whereby farmers were taught how to better balance the NPK mix according to soil pH. This technical advice and training on use of fertilizers was probably as important as the new varieties and led to the achievement of impressive results. Statistics reported by the Agricultural Extension Centre indicate an increase in average yields of 120-150 kg/sao to 250-300 kg/sao, roughly doubling rice production. This has clearly been a highly effective component with a considerable impact for those farmers participating in this model. The data collected from household interviews with demonstration farmers do not indicate quite so

impressive results. However, despite some discrepancy in the actual figures reported, demonstration farmers interviewed report substantial increase in yields. Table 4 below illustrates these statistics.

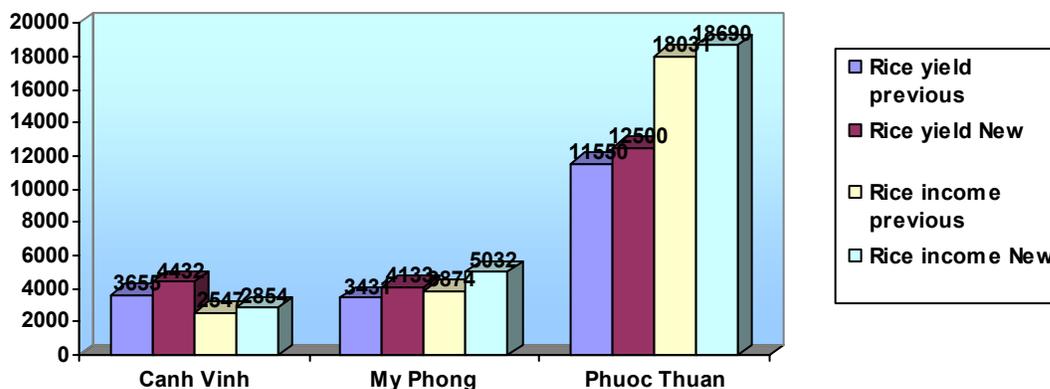
Table 3: Rice Production Demonstration

	Commune	No of HH	Avg Yield Previous (kg/ha)	Avg Yield New (kg/ha)	% increased
In project area	Canh Vinh	7	3,655	4,432	21.2
	My Phong	7	3,431	4,133	20.5
	Phuoc Thuan	3	11,550	12,500	8.2
	Total	14	4,956	5,733	18.6
In control area	Canh Vinh	15	4,990	4,490	- 11.1
	My Phong	21	4,070	4,090	0.4
	Phuoc Thuan	21	10,530	10,490	- 0.4
	Total	57	6,692	6,553	- 2.9

Source data: Household survey in three project's communes

The data shows a remarkable difference between project and non-project communes in terms of rice production, where project communes have exhibited substantial increases in productivity against non-project communes where farmers have experienced only marginal gains or indeed decreases in production.

Fig 4. Rice yield (kg/ha) and income (thousand VND) from rice before and after project



The increase in rice productivity becomes even more significant when we consider the potential benefits of the cash crops grown during the dry season. A few farmers have continued dry rice production during the summer but for the majority involved in the models, the yields are often so low that what is lost by not growing rice in the dry season is more than made up for by the increased yields of the new varieties and planting/fertilizing techniques as well as the production of cash crops (which normally would have been grown in the winter/spring or autumn).

A further point is that the new production techniques, beyond any increases in yields actually enable farmers to better control and manage risks of crop failure i.e. by producing as much or more rice in the winter/spring and autumn, together with the growth of water-efficient or drought-resistant rice varieties or

cash crops during the summer, the farmer is less reliant on his/her summer rice crop and in so doing is less vulnerable to the incidence of rice crop failures during drought periods.

Thus the rice models have generally been effectively implemented and have shown considerable potential for securing local farmers food security, improving income and as a result contribute towards reducing vulnerability to droughts particularly for the farmers in the upland communes of Canh Vinh and My Phong.

The hybrid rice model was probably the least successful of the agricultural extension models and was piloted in Phuoc Thuan commune. The new hybrid rice model in general produced by comparison a more modest yield increases and a marginal increase in incomes due to the lower market value of the variety (only good for rice cakes and noodles). This trend was verified by data collected during household interviews and is shown above in Fig 4.

The case study overleaf is drawn from an in-depth interview with Mr Dieu, a demonstration farmer in Phuoc Thuan commune. This case study shows the level of care and support provided throughout a typical demonstration model (FFS) and shows that in spite of only modest income gains, the intervention has had some success and that there has been some uptake by his neighbours.

Mr. Pham Dieu lives in Tan Thuan village, Phuoc Thuan commune, Tuy Phuoc district. He is 42 years old and is head of a 4 person family household. In many ways, Mr Dieu faces a common problem amongst poor farmers in the South Central Coast region – a fundamental lack of agricultural production land. His family has a total of a mere 0.75 ha or 15 sao of rice fields. In addition to the physical lack of land, Mr Dieu is also constrained by the productive capacity of the land due to the occurrence of droughts and water shortages.

In response to these problems Mr Dieu regards himself as being one of the fortunate farmers selected to become a demonstration farmer. In Phuoc Thuan, the project piloted a hybrid rice production model. As part of the demonstration model he received seeds of the new hybrid rice variety, *Nhi Uu* (imported from China by the Binh Dinh Seed Company) 20 days before planting throughout two cropping seasons (Monsoon 2008 and Winter-Spring 2009 crops). Although the project only provided enough seed for 6 sao but Dieu and his family elected to buy enough of the same variety of seed to plant the remaining 9 sao. Around 5-7 days after planting, he received fertilizer - Urea 4 kg/sao and 3kg potassium per sao for 6 sao. After 20-25 days, he received 5 kg urea/sao and 2 kg potassium/sao (for 6 sao). The third time, after 40 days, he received 4 kg urea/sao and 2 kg potassium/sao (for 6 sao) and fourth time, his 6 sao rice field received 5 kg urea/sao and 2 kg potassium/sao. Dieu himself also invested in buying the same quantities and ratios of fertilizer. He also received three batches of pesticides from the project.

At each stage project officers together with the Tuy Phuoc District agricultural extension center and staff came to his fields to teach him how to plant, apply and mix fertilizers and pesticide sprays. The extension team visited 4 times per crop season and before harvesting time the officers came to assess the yield. Each time they arrived, the project invited many farmers from the village to visit his rice field and introduced the method and technical issues related to the cropping period.

The results of his harvests showed significant yield increases. In the monsoon season, he managed to produce 7.6 tons per hectare and in winter-Spring cropping period he produced 7.8 tons per hectare. Thus his family was able to harvest a total of 11.55 tons representing an increase of 50% in comparison with the previous rice season. This also meant that he was able to sell more and improve his income slightly. His only negative comment was that the new variety has a very high yield but the quality is not suitable with local tastes and so has a lower price in comparison with the local variety and consumption volume was still low. Despite this problem, his demonstration was successful and has increased his family income. Now he is still growing the hybrid rice.

Overall Mr. Dieu appreciated the project's support because the new model was extremely appropriate for his cultivation conditions and he was appreciative of the project's efforts to improve technical production knowledge not only for himself but for his neighbours too. He commented that this has also helped to raise the incomes of other farmers too who were not demonstration farmers.

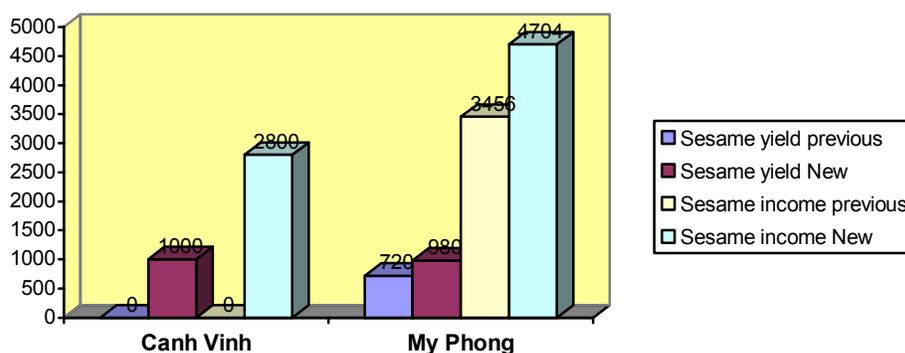
Sesame Production

The sesame model was hugely successful and changed the variety and planting season of the cash crop in Canh Vinh (from V12 – V7) and My Phong (from V12 – V36) communes. AEC reports indicate yields more than doubled on average. Data from household interviews supported these claims and are presented below as Fig 5. By extrapolation based on current market prices this offers the potential to earn between 17 -21m VND/ha and thus make a very significant contribution towards stabilizing livelihoods during a traditionally difficult seasonal period. The data in Table 5 and Figure 5 below does not quite support these kind of income claims, probably because farmers do not have sufficient land. Nonetheless impressive increases in income have been confirmed by the household interview data, especially when compared with non-project commune data which indicates no change.

Table 4: Sesame yields

	Commune	No of HH	Avg Yield Previous (kg/ha)	Avg Yield New (kg/ha)	% increased
In project area	Canh Vinh	4	0	1,000	
	My Phong	2	720	980	36.1
	Total	6	720	2,980	313.9
In control area	Canh Vinh	1	800	800	0
	My Phong	1	600	600	0
	Total	2	700	700	0

Fig 5: Sesame Production in project area - yield (kg/ha) and income (thousand VND) from before and after project



Peanut Production

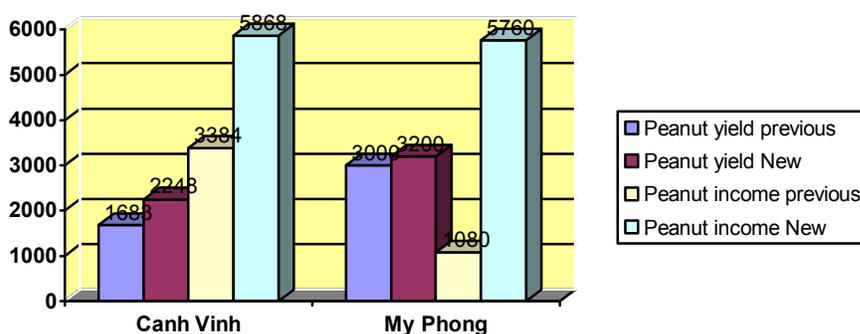
The project introduced a new variety of peanut (TD25) to demonstration farmers in Canh Vinh and My Phong communes. Once again the AEC reported significant achievements in terms of demonstration farmers almost doubling their yields with yields rising from a reported average of around 110 kg/sao to an average of 202 kg/sao with the new variety. Data from the impact evaluation surveys does not indicate quite the same level of increase in yields but it does show substantial increases in yields particularly in Canh Vinh and dramatic increases in incomes from peanuts. A possible explanation for the difference is that this evaluation survey collected data from a range of households, those involved in the training as demonstration farmers, interest group members and other members of the community, whilst AEC reports

are based on studies of the demonstration models alone. Overall the project data compares favourably with the control group.

Table 5: Peanut yields

	Commune	No of HH	Avg Yield Previous (kg/ha)	Avg Yield New (kg/ha)	% increased
In project area	Canh Vinh	6	1,683	2,248	33.6
	My Phong	2	3,000	3,200	6.7
	Total	8	2,012	2,486	23.6
In control area	Canh Vinh	4	2,070	1,800	- 15.0
	My Phong	5	2,180	2,500	14.7
	Total	9	2,131	2,189	1.50

Fig 6: Peanut Production in project area - yield (kg/ha) and income (thousand VND) from before and after project



Maize Production

The maize production model was piloted with 14 demonstration households and introduced the new C5252 hybrid variety and although less substantial improvements were made, the model was positive nonetheless. Provincial AEC reported slight improvements in yields from 250 to 300 kg/sao. The evaluators would note that although nothing was reported by farmers, hybrid maize varieties are notoriously susceptible to disease and also do not tend to last as long as traditional varieties (especially without any training in post-harvest processing) – thus the incremental gains made by this new variety may be outweighed by the problems associated.

Chili Production Model

The chili production model was also only implemented in Phuoc Thuan commune (as a result of localized preferences) and achieved some successful results chiefly by being able to produce fresh chilies during the drought season using a drip technology. The results from the trials appear to indicate that whilst yields are approximately the same, the farmer is able to get a 3-4 fold increase in price (from 10,000 VND/kg – 32-40,000 VND/kg). This means the model was very effective and clearly presents an excellent benefit to the participating farmers. Unfortunately, comments from the commune staff and the provincial AEC suggested that the sustainability of the model is in doubt due to the high investment cost required for the drip

technology (estimated to be up to 10 million VND). Perhaps with access to credit, some farmers might consider this investment, so it is the opinion of the evaluators that this model should not be written off entirely. It is acknowledged that with this size of loan a farmer will almost always prefer to invest in livestock, but perhaps with increased drought and reduced grazing areas in dry seasons, there may be more costs and risks associated with livestock raising. As such models such as this one could present a viable livelihood option. Data from household interviewees is presented below and supports the general finding with a slight increase in production.

Table 6: Chili Production

Commune	No of HH	Avg Yield Previous (kg/ha)	Avg Yield New (kg/ha)	% increased
Phuoc Thuan	3	7,075	7,650	10

Source data: Household survey in three project's communes

Livestock

Livestock are a crucial form of physical capital to the rural poor farmers of Central Vietnam but the effect of climate change in this region appears to be longer dry periods and ever shorter, more intense rains. The drought periods are creating problems as the natural environment provides less and less for cattle to eat, meanwhile lesser yields often means farmers barely have enough food to feed their families, let alone feed their cattle. Poorer nutrition leads to an increased occurrence of disease amongst cattle, or in the best case scenario merely lower live weights and therefore reduced returns on sale (and importantly longer periods before cattle reach maturity and thus an appropriate weight for selling). Another key issue is the fact that livestock, as a key livelihood asset are often purchased on credit as part of a livelihood strategy with the intention being that through animal husbandry and livestock production a farmer may be able to improve his financial capital and overall livelihood security. However, in conditions of persistent drought, the death of livestock is not uncommon and this in turn is a significant factor in reinforcing poverty through cycles of debt.

The OFDA project introduced several livestock models which intended to improve livestock production and hence create greater livelihood security for project beneficiaries, as livestock in turn can be converted into financial capital which offers greater flexibility during periods of shortfall. As with the agricultural activities, livestock models were piloted by key demonstration farmers using the FFS approach.

The table below shows the number and type of livestock demonstration models piloted.

Table 7: Livestock demonstration models

Commune	No of HH raising cattle	No of HH raising pig	No of HH raising chicken	No of HH raising goat
Canh Vinh	7	10	6	2
My Phong	7	10	6	
Phuoc Thuan	7	10	6	
Total	21	30	18	2

Source data: Reports on carrying out livestock demonstration model. Centre of Livestock Breed, Binh Dinh province

Exotic Sows

The project introduced exotic sows to local beneficiaries as a perceived method of improving poor household's physical asset base and the opportunity to access greater financial capital. Ten households from Canh Vinh and Phuoc Thuan communes acted as key demonstration farmers for this model and were provided with 2 sows each. A total of 30 people from each commune (inclusive of the ten beneficiary farmers) formed interest groups and received 2 training courses on animal husbandry and care for the sows and piglets (including feeding and vaccinations). Monthly check-ups were then carried out by the provincial animal husbandry centre.

It is difficult to assess the impact of this model in terms of improved incomes since it has taken rather a long time for most of the pigs to become pregnant in part a consequence of the fact that farmers had to pay for artificial insemination, a cost which farmers were made aware that they would have to bear but were frequently unable to do so for long periods of time. Others have simply had difficulties in raising and breeding the new species. In spite of this, the provincial animal husbandry centre estimates average profits of around 4.5 million VND/household in Phuoc Thuan and 8.2 million VND/household in Canh Vinh based on the fact that more piglets were born in Canh Vinh. For some the model has been successful, however a number of households have met with considerable difficulty in implementing this model.

Firstly, the project only provided 2 vaccinations, the rest had to be paid for by the farmers themselves and in some cases didn't happen (in spite of repeated calls from extensionists and the Provincial Animal Husbandry Centre to vaccinate) and interviews with the Animal Husbandry Centre revealed this to be the probable cause of numerous pig deaths. Farmers in certain cases also followed the traditional belief that sows should not receive vaccinations during pregnancy.

Secondly the project did not provide sufficient concentrate resulting in calcium deficiency and a number of farmers reporting broken legs amongst their pigs. It should be noted that farmers were repeatedly informed that they would need to share some of the costs, including that of concentrate but for one reason and another various farmers did not. Such pigs were killed.

Overall, it would appear that the model required considerably more investment costs (financial, technical and human) than was perhaps initially foreseen by the farmers. As a result, this particular model was regarded as not successful by most interviewees (including the animal husbandry centre, commune staff and local farmers). The high level of investment also probably means further uptake and replication is unlikely.

Mongcai Pigs

Ten households in My Phong commune were selected as key demonstration farmers for the Mongcai² pig model and subsequently received training, materials and 2 Mongcai sows. In contrast to the exotic sow model, beneficiaries are delighted with this model, and although returns may not be as high as for the exotic sow, the species is much easier to breed and feed and profits are estimated to be around 3.55 million VND/household for the first litter (the first litter has only just been delivered and others are about to be delivered in most cases and thus no sales have been made as yet).

This model shows a high potential for replication and village leaders have already indicated that there will be a sharing of the second litter amongst other farmers in the interest groups. The Mongcai pig model looks to be a highly appropriate and successful intervention which will be sustainable over the long term

² A species of small black pig that is more widely farmed in northern Vietnam and prized for its sweet and succulent meat.

and will serve to improve household incomes of poor farmers in the project area and thus help to reduce vulnerability to drought.

Chicken Model

Six households per commune were selected as demonstration farmers and provided with 20 chickens each. Some households already had chickens others didn't. A further 14 households participated in each commune as interest groups. All beneficiaries received training in breeding and veterinary skills and received various materials including netting for cages, vaccinations.

Estimates from the provincial animal husbandry centre indicate that demonstration farmers in the three communes may be able to make between 624,000 VND – 877,000 VND per household/mth depending on the number of chicks produced or an average of 720,000 VND/household/mth. The model appeared to be more successful in Phuoc Thuan commune with a higher survival rate of chicks.

Cattle Fodder Model

The cattle fodder model provided elephant grass seeds, cattle vaccinations and training for poor farmers in all 3 communes (7 households/commune). The model required that farmers possessed at least 2 cows and had sufficient land available (1 *sao*) on which to grow fodder crops. Following selection of the demonstration farmers and establishment of the interest groups, the Provincial Animal Husbandry Centre provided training in how to plant and care for the grass species (including application of fertilizers and pesticides), and how to care for and feed their cattle. Cattle were provided with vaccinations and farmers were provided with relevant equipment for constructing stalls.

Overall this model appears to have been implemented effectively with training delivered in a timely manner. It is generally quite a straightforward model and shows potential for creating a positive impact for farmers with the main benefit being the increased live weight of cattle and in a shorter time period. Interviews with commune staff, village leaders and the provincial animal husbandry centre all indicated an average increase in live weight from 220 to 280 kg following this project intervention. An in-depth interview was conducted with Mrs Muoi and a case study below demonstrates the typical experience of the demonstration farmer for this model.

The sustainability of the model is a little questionable however as further uptake and replication depends on having sufficient available land. Although most demonstration farmers were able to implement this model by growing elephant grass on already marginal soils, the poorer farmers either don't have cattle or must use every piece of available land for the production of rice or maize. Indeed this is a generic problem associated with the key farmer/FFS approach, where the poorest and most vulnerable households sometimes cannot really benefit from the intervention. The evaluators would note that they have observed examples in northern Vietnam where elephant grass models have led to farmers actually selling the grass. This would suggest there is the potential for involving poorer farmers who may not have cattle of their own and may be able to achieve some incremental benefit by growing grass for sale on their own marginal land areas. Despite questioning, no farmers were reported to be actually selling the grass at this stage. It is however a possibility for the future if the project is to consider rolling out the model or continuing to work in the same project area in the future.

Mrs Luu Thi Muoi is a farmer living in Tan Thuan village, Phuoc Thuan commune. She is 58 years old living with her husband and her son. She is one of the 7 demonstration farmers piloting an approach to grow elephant grass for raising cattle. Throughout the demonstration model, Mrs Muoi received technical training on planting and the use of insecticides. Prior to this project intervention Mrs Muoi had mostly allowed her cattle to graze in upland areas surrounding the village.

Her family began to grow grass towards the end of 2008. She received 400 kg of grass seed sufficient for 1,000 m² (2 sao). Project officers and provincial agriculture extension staff visited her fields to provide advice and training on how to grow, transplant and cut or harvest the grass and how to apply fertilizers and insecticides.

The grass grows quickly and one month after transplanting, she was able to produce the first harvest. Thereafter she is able to produce a new crop every 20 days. The harvested grass was enough to feed 4 cattle. She also received 7 bags of animal feed from the project. These bags fed her 4 cows for two months.

Through the project's introduced fodder system her cattle matured much faster than in the past and after 3 months (from December 2008 to February 2009) her cattle increased their weight at a rate of around 70kg/month (from 80 kg to around 290 kg). The current market price of cattle live weight is around 60,000 VND/kg, meaning her family was able to sell her cattle for around 17.4 million VND each. This represents a sizeable increase in income since in the past her cattle only managed to put on around 10-15 kg/month in weight and therefore after around 8 months of raising the cattle only weighed around 200 kg and thus could only be sold for around 12 million VND. Therefore the difference to Mrs Muoi was over 20 million VND. This in itself is a considerable benefit but in fact the economic gains are more substantial due to the fact that she can now raise 8 cows or more to maturity in one year (based on 2 lots of 4 cows) because the elephant grass fed cows can reach maturity and heavy weights much faster.

During implementation demonstration model, she also assisted 3 other farmers in the village to raise cattle by sharing her experience in growing the fodder crop. The families raised from 2 - 3 cattle each, and after 4 - 5 months their cattle increased their live weight from 40 - 50 kg/month each.

Mrs Muoi did comment however that despite the fact that the fodder crop model was so successful, many poor farmers simply don't have sufficient land of their own on which to grow the grass. With limited land area, farmer use all the land for growing rice and other food crops in order to ensure family food security. Her village only has around 10 farmers applying the fodder crop model. Many other farmers want to follow her model but they do not have enough land to follow her demonstration.

Boer Goats

The project provided 2 male Boer goats to 2 interested demonstration farmers in Canh Vinh commune. Farmers were provided with training in how to breed the goats with the intention being to breed this new, larger, introduced species with the variety currently being raised in the locality. The Boer goat is prized for its meat and would offer farmers an opportunity to increase incomes through the higher price of the hybrid goat meat. Participating farmers had to have 25 female goats.

The breeding appears to have been highly successful as out of 104 goats (amongst the two households), 45 are now pregnant and 17 kids delivered. Estimates by the provincial animal husbandry centre suggested returns of 8-10 million VND/year based on the productivity of this species and in accordance with their experiences from implementing this model elsewhere.

Beneficiary farmers stated that they were delighted with the results of this intervention and anticipate being able to boost incomes significantly through the sale of the new hybrid goats. In this sense the model is an unbridled success, and the male Boer goats already being passed around other goat farmers in the

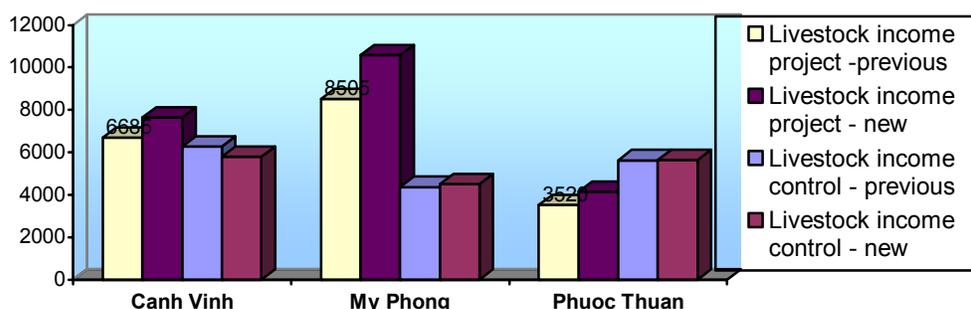
community beginning with those in the Boer goat interest group (21 households). Thus, the sustainability of the intervention appears to be guaranteed. However, the promotion of goat farming models in a drought mitigation project should have been questioned and an assessment of the environmental impact of such an activity should have been carried out as a minimal requirement. All over Vietnam, goats are bred in mountainous regions and typically allowed to roam free and continue to be a major cause of forest degradation and prevention of regeneration compromising the protection of important watersheds.

Overall the livestock models, like the agricultural models were generally successful in terms of improving productivity. In certain cases it is too early to tell whether incomes have improved as a result of the new models even for the demonstration farmers let alone wider impact. However, the impact of the livestock interventions is clearly having a positive impact on the project area when the income datasets are compared with the control group. This is reflected by the data presented below in Table 10 and Figure 10 which illustrate significant increases in income from livestock from interviews in the project area compared with the control communes, that have either exhibited declines in income from livestock or only very marginal increases. For the farmers in the project area considerable impacts on incomes may become even more of a reality especially for Mongcai pig farmers, cattle fodder model demonstration farmers, chicken farmers and goat farmers once the new techniques have had the chance for wider uptake. The exotic sow model will probably not be sustainable on a large scale but the others offer good potential for further replication and wider impact although it is not really possible to measure at the moment.

Table 8: Livestock incomes in project and control areas

	Commune	Avg income Previous (thousand VND)	Avg income Previous (thousand VND)	% increased
In project area	Canh Vinh	6,685	7,650	14.4
	My Phong	8,505	10,580	24.4
	Phuoc Thuan	3,520	4,141	17.6
	Average	6,237	7,457	19.6
In control area	Canh Vinh	6263	5801	-7.4
	My Phong	4367	4509	3.3
	Phuoc Thuan	5627	5647	0.4
	Average	5,419	5,319	- 1.8

Fig7: Livestock income (thousand VND) from before and after project



3.3.3 Sustainability of the Agriculture and Livestock Models

The sustainability and wider impact of the new models introduced depends on four key factors i) the success of the new models in increasing yields and improving incomes; ii) broad-scale awareness and dissemination of the techniques; iii) the capacity of extension workers to be able to support further uptake and; iv) the investment costs and risks to be borne by the farmer.

As shown above almost all the agricultural extension models demonstrated very impressive results and this will be a key factor in a) farmers maintaining their agricultural production behaviours and b) other farmers copying or utilizing the same techniques and technologies. Enthusiasm was expressed at all levels, from farmers themselves up to provincial level AEC for expanding and developing all models piloted under this project based on the successes of the trials.

The project, through the FFS approach was only able to support a very small number of key farmers directly and thus the real success of the intervention depends on being able to bring these benefits to the rest of the population. Thanks to the high standard of training courses, leaflets and materials provided, the benefits should be relatively easily transferable and capacity sufficiently developed at the commune extension level for replication. It should also be noted that the structure of the demonstration and training courses was deliberately designed to maximize the dissemination of the models with numerous training opportunities delivered on a commune basis and the participation of interest groups in training courses at the village level for specific models (i.e. for farmers interested in the new models but not participating as demonstration farmers).

Information from DARD reports and household interviews conducted during the final evaluation mission appear to indicate a reasonable level of uptake of the new models. Many of the demonstration models have only just completed their cycles and it is therefore likely that many farmers may have been waiting to see the impacts for themselves before converting to the new techniques. Therefore it is probable that eventually uptake of the new models will be higher than these initial findings suggest. Nonetheless a DARD assessment report, indicates that 38 out of 42 (90.5%) demonstration farmers interviewed reported that villagers from other villages had visited their model and were implementing the models for themselves. Data from the impact evaluation survey showed that 93.5% of demonstration farmers interviewed had shared their experience with other farmers. The data from this assessment also indicated that 95% of demonstration farmers will continue with the new production techniques. This high level of continuance suggests there is a high potential for sustainability and wider uptake. Table 6 below is data from the evaluation survey and indicates an uptake of an average of 7.8 households for each demonstration model. Considering the fact that many of the models have only just been implemented, the evaluation team considers this to be a reasonable figure and household interviews indicated that this was often neighbours of demonstration farmers.

Table 9: Uptake of demonstration models

Commune	No of demonstration farmers surveyed	No of non-demonstration farmers applying demonstration models	Average No. new HH applying new techniques per model
Canh Vinh	17	92	5.4
My Phong	11	136	12.4
Phuoc Thuan	6	39	6.5
Total	34	267	7.9

Above and beyond the immediate project locality, regular reporting and end of activity dissemination workshops have informed district and even provincial levels of trials effectiveness and results (through project's operational/coordination mechanism). This dissemination structure appears to have been highly effective and sustainability and uptake of the new models looks encouraging. It is too early and difficult to tell at this stage the extent to which the new models will be brought to other areas but since these models are already in line with provincial policies (especially 3 to 2 crop rice production and the change to the new varieties ML202 and VD8) there is a high opportunity for sustainability and further uptake. Effectively the project has allowed the province the chance to pilot models which were already known or suspected to be effective, it is now just a matter of acquiring the budgets for rolling out!!

Finally, the costs of investment or risks for the farmer do not appear to be high for the models with the exception of the chili model, and this means changing approaches and behaviours is that much more possible. Therefore, overall it would appear that this has been a highly appropriate and successful project component with a broad scale impact for poor farmers living with drought in Binh Dinh province.

3.3.4 Vocational Skills & Training

The intention of the vocational skills and training component was to pilot a model of how poor farmers and especially women might be able to increase household productivity, diversify their income sources and in particular generate alternative incomes from off-farm sources. The project also provided training courses in small business and domestic financial management with the intention being that this would assist in households being able to save and use money appropriately in order that financial capital could be transferred into other forms of capital during periods of shortfall and hence reduce vulnerability to the occurrence of droughts. In theory, this was a laudable objective and certainly forms an important part of a strategy which intends to improve sustainable livelihoods and reduce vulnerability to shocks and trends. The execution of this component did however run into some difficulties during implementation and was certainly impacted by the premature closure of the project.

Comments from meetings with the Women's Union from commune to provincial level indicated that the financial management training courses (including group management, business start-up and household financial management training) were well-delivered and provided some much needed capacity building to poor women in the project area. 90 women benefitted from these training courses (30 per commune).

This activity was however implemented towards the end of the project and it is difficult to assess the long term impact and sustainability in terms of women's business skills and household financial management. In truth certain comments during the interviews appeared to indicate that the concepts were a little bit difficult for many of the poor rural women to grasp and that many were too shy to participate fully in the training activities. Given the one-off nature of the training it is quite likely that many of the business and financial management practices will not be maintained. Probably, for this activity to have been more effective it should require a certain amount of follow-up, monitoring and training over a more protracted period of time in order that women are able to build confidence in using their new skills throughout the annual income cycle. In this sense the Binh Dinh project might actually have fared better by borrowing certain approaches from other CARE projects which have sought to establish some form of womens development groups, such as the Livelihoods and Rights Clubs (LARC) project in two provinces in northern Vietnam. This project is also implemented in partnership with the Women's Union and numerous groups have been established based on interests at the sub-village level. By actually forming these groups and building their capacity through long term support the clubs are much more sustainable. The women in Binh Dinh have been trained in group management but have not actually formed any kind of groups, thus there is no real learning through doing and it is likely that the skills learned will not be put into practice and lost.

However the authors of this report acknowledge that a project cannot do everything and that there are of course limitations.

The logical framework also originally proposed vocational training in a growth sector for 50 women. This particular activity proved to be somewhat difficult. Once again the project tried to adopt an extremely participatory approach with several attempts to try and gather ideas from the grassroots level as to exactly what training and skills were desired. Firstly the Feasibility Study (February 2008) paid some attention to the needs of rural women and requested suggestions. Secondly, the Provincial WU later carried out a needs assessment to try and identify possible training activities. This report indicated that women in the three communes had different wishes eg. in Van Canh women wanted to make bags from banana leaves, in My Phong women were interested in making rice cakes for export and Phuoc Thuan women were only interested in agricultural productivity. The Van Canh and My Phong ideas did not appear to incorporate any market-based justification whilst the Phuoc Thuan idea was already incorporated in the other project components.

Finally the project team tried to develop an idea and so ultimately the Minh Phat Company was approached with the idea that women may be able to produce rattan baskets. This activity was thus only feasible in Phuoc Thuan commune (close enough to the factory and distribution network) and as a result vocational skills training was provided to 30 women from Phuoc Thuan commune. This training was provided between 28th February-24th March 2009 and thus it is impossible to assess in quantitative terms the intervention's impact since no baskets have actually been sold yet at the time writing and it was stated that it takes around 2 months for the women to be able to produce a quality, saleable item.

Ultimately the project team should receive credit for coming up with a solution that was well-received by the women and the WU in Phuoc Thuan and met the objectives of the project. Potentially, the activity could provide significant benefits to women in the project area by making them substantial contributors to household incomes and by deriving an income from an activity which isn't affected by the occurrence of droughts.

However, the sustainability of the intervention is questionable since at the time of writing the WU of Phuoc Thuan only has an agreement or a 'promise' from Minh Phat Company that it will help them as opposed to any sort of binding contract based on agreements of quantities, quality, price and other real business factors. The WU commented that it will try and get a more solid contract with the basket company. If they can do so, this would completely change the outlook for this component and present a real and viable alternative source of income for poor women in the project area.

As a result the vocational training aspect of the livelihoods component rather stands by itself as an isolated suite of activities and the impacts of which appear to be limited at the present time, although in truth it is too early to tell what the impact will be in terms of creating an additional income for women in the project area. Without a formal contract with the Minh Phat company, the end product currently appears unsustainable. This is unfortunate because it is in spite of the best efforts of the project team as well as the WU. In retrospect, actually making a meaningful difference in this project sub-component would require more careful consideration, thought and planning as well as more time and budget so as to provide more substantial support to capacity-building and development of alternative incomes.

3.3.5 Overall Impacts on Incomes from the Livelihoods Component

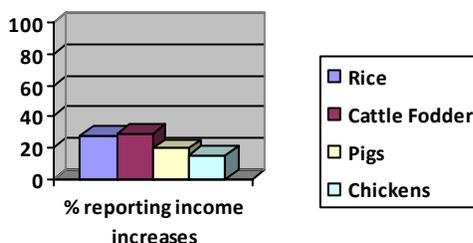
The main indicator for project success in the livelihoods component was increased incomes. Therefore, the table below presents data from household surveys conducted during the impact evaluation. The data

illustrates that household incomes of poor farmers in the project area have increased overall and therefore the project does appear to have been effective and have had an impact in this regard.

In April 2009, a DARD assessment of 42 households who directly participated in demonstrations, (22 from agriculture, 20 from livestock) was conducted. The data presented in that report also generally supports the evaluation team’s findings: 37 households (69%) reported that their income had increased. In the agricultural demonstrations, the increased income ranged from 100,000 VND (\approx 6 USD) to 2.0 million VND (\approx 114 USD) per crop season. For livestock demonstrations, 25 household (60%) of the surveyed households reported their income increased from 1.0 – 2.0 million VND (\approx 57 – 114 USD) per growing season. The livestock models showed an increase in income of 45%, whilst crop models increased incomes by 18.2%. Evaluation survey data revealed that 88.6% of demonstration farmers reported income increases.

The final impact evaluation survey also collected data from farmers who only received training from the project and indicated that even amongst this group, income improvements were to be observed. The figure below shows income increases reported by farmers participating in training alone as interest group members. These figures may get higher as more farmers convert to the models.

Fig 8: Percentage of non-demonstration project farmers experiencing increased incomes from selected models



Overall income data for project and non-project communes is presented below as Fig 9. The data compares pre-project and current annual incomes (estimates) as reported by interviewees during household surveys conducted as part of the impact evaluation survey. The information provides some measure of overall project impact in terms of poor farmer’s being able to gain greater access to valuable financial capital and as a result should be in a position to transfer this increased financial capital into other forms of capital during periods of drought and in so doing reduce vulnerability to shocks including droughts and improve livelihood outcomes as a whole.

The data in Fig 9 indicates, income levels overall have risen on average in the project area and almost all of this increase appears to be due to project interventions as most interviewees were demonstration farmers (73% of project area interviewees) or interest group members (20.5%). In percentage terms this only reflects a percentage change in annual income for the whole project area of 3.7% as compared with 2.9% for the control groups. The evaluation team believes that these figures do not yet show the full impact of the models because they have only just been introduced and in many cases the farmers have not yet sold their products eg. the Mongcai pig farmers, the goat farmers etc.

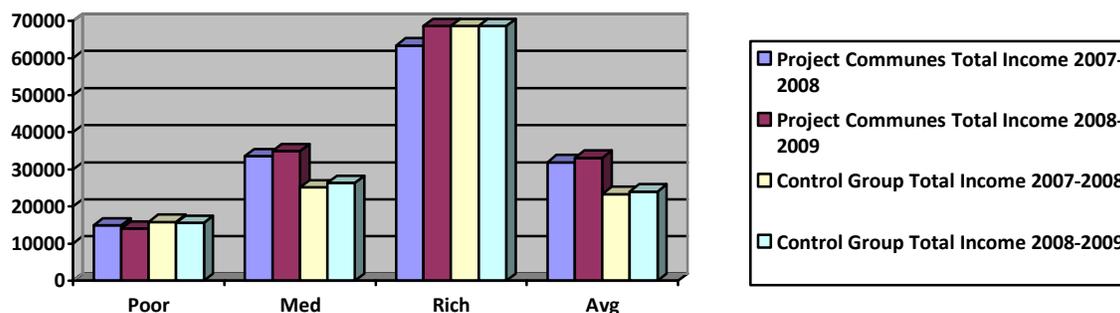
The data for the project communes does however rather worryingly indicate that the poor households’ incomes have actually experienced reduced incomes over the project period. From the cross-section of the interviewees surveyed, few poor households appeared to be direct project beneficiaries. This is often the case with the FFS model whereby it is the medium income households that appear to be the ones selected for the models. It is difficult to dissociate this data from general trends in rural Vietnam where the rich get richer and the poor get poorer and level this as a criticism of the project as there are many other factors

and variables to consider. Thus at first glance the data does not appear to indicate that the project has had much impact on the most vulnerable households.

Table 10: Total Income changes in the project area and control groups

	Income 000 VND				%
	Poor	Med	Rich	Avg	
Project Communes Total Income 2007-2008	14918.1	33543.1	63433.3	31929.6	
Project Communes Total Income 2008-2009	13966.2	34925.2	68595	33112.9	3.7%
Control Group Total Income 2007-2008	15836.9	25217.7	68650	23346.5	
Control Group Total Income 2008-2009	15588.3	26301.5	68650	24037.2	2.9%

Fig 9: Annual Incomes in Project Communes and Control Groups (000 VND)



However, the evaluation team also broke down income data by source of income (see Fig 10 below) and this data illustrated that in fact the poor are losing out through reduced considerable reductions in off-farm incomes, whilst the project generally focused on agricultural products. Seen in this light, it would appear that the project may be contributing to improved incomes from agriculture. In fact, this can be said with reasonable justification – the most striking feature of the graph below is that almost all the statistics have remained virtually the same with the exception of agriculture-derived incomes for poor, medium and rich households in the project area. This is best observed by the average column on the right.

Fig 10: Agricultural and Off-farm Incomes in project communes and control groups

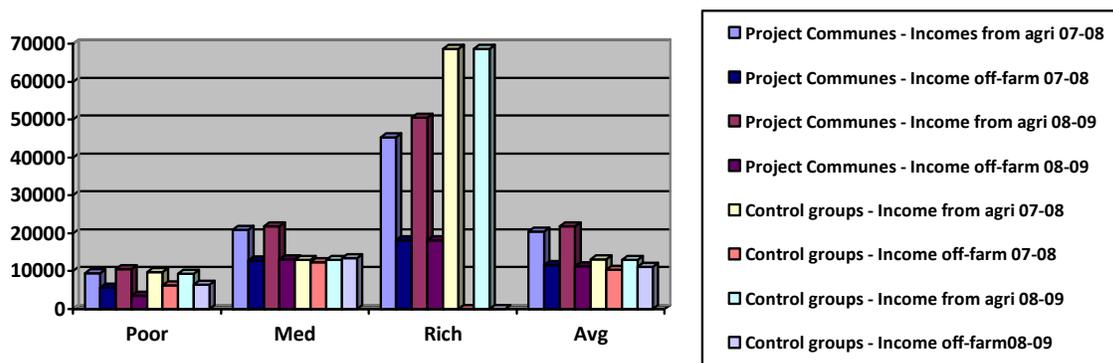


Table 11: Summary Evaluation of the Livelihoods Component

	Goal/Objective	Effectiveness	Impact	Sustainability
	Overall Goal: To enable communities to sustainably live with recurrent drought	<p>The agricultural extension models have provided excellent pilot demonstrations of improved farming techniques to improve agricultural production, income and reduce food insecurity. As such this aspect of the project has been extremely effective and successful.</p> <p>Vocational training activities were implemented too late.</p> <p>The water supply activities could have been implemented more effectively but in reality the project was constrained by time.</p>	<p>The impacts for those directly involved in receiving training, seeds and equipment are hugely significant in terms of increased yields and the potential for higher incomes from sales, especially with 3 crop to 2 crop change and new rice varieties grown in My Phong and Canh Vinh. The hybrid rice variety piloted in Phuoc Thuan has increased yields but has not significantly increased income. The project could only directly impact a limited number of households but the successes of the trials should mean that impacts are more widespread in the longer term.</p> <p>The impact of the vocational training models is difficult to see at this early stage.</p>	<p>The DMAPs sustainability is threatened to some extent by the lack of an opportunity to consolidate and integrate with socio-economic development plans but the project has increased the potential for more participatory approaches to planning in the long term.</p> <p>Many of the agricultural models were highly appropriate and demonstrated excellent potential for replication and sustainability.</p> <p>Water supply installations have met with some challenges in terms of maintenance and repair but will likely benefit a large number of people in the project area in the long term.</p>
1	Diversified sources of household income to reduce vulnerability to drought	<p>Effective. The agricultural extension models appear to have created the potential for higher incomes through higher yields and the diversification of incomes of demonstration farmers either through the introduction of new cash crops or through switching the rice crop from 3 to 2 crops and growing drought resistant cash crops in the 'wrong'/drought season. Farmers can therefore gain a more substantial income at a time when they generally earn little financial income.</p>	<p>Difficult to assess wider impacts on incomes (no baseline and early closure of project) but it appears that the new cropping systems have increased and diversified incomes, especially if the uptake of the models becomes more widespread (reasonable likelihood). The introduction of new varieties and in particular cropping regimes is an important and deliberate achievement of the project and will benefit farmers in making them less vulnerable to drought.</p> <p>The alternative income model for women has not diversified incomes at all so far but could do in the future.</p>	<p>The success of the models is likely to mean that i) farmers will continue with the new models; ii) other farmers will copy the new models.</p> <p>The hybrid rice model faces the greatest challenges in terms of sustainability as there appeared to be greater investment, lower price for the rice and certain difficulties with the technique.</p> <p>The Provincial AEC is highly committed to developing the peanut, sesame, chili, corn and 3-2 crop rice models and these show great potential for sustainability and further uptake based on successes in Canh Vinh and My Phong.</p>
2	Agricultural skills that enable adoption of enterprises that have higher return to water resources and lower susceptibility to drought	<p>Effective. The project has succeeded in demonstrating the advantages of changing from a 3 to 2 rice crop production system and has significantly improved agricultural productivity.</p>	<p>The project has experimented with several different drought resistant models which have exhibited excellent results in terms of yields and produced very positive impacts in terms of higher returns and lower susceptibility to drought.</p>	<p>As above, the success of these models is likely to ensure their sustainability and further uptake.</p>
3	Improved environmental health of land and water	<p>The objective appears disconnected to the actual activities implemented.</p>	<p>The impact of the new planting techniques was not monitored in terms of water consumption</p>	<p>The environmental sustainability of the new models was not measured and it is</p>

	resources to sustain basic living for the poorest of the poor	Activities have done little to improve the environmental health of land and water resources.	levels or other environmental indicators.	therefore not possible to discuss sustainability objectively.
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3.3.6 Clean Water Supply & Sanitation

The clean water supply and sanitation component delivered a number of important outputs to project beneficiaries, improving livelihoods by developing the water supply infrastructure and providing better access to water. The provision of water filters also attempted to provide a direct benefit to poor people in the project area and reduce the occurrence of water-borne infections and diseases. Since this component mainly relates to the installation of infrastructure, it is relatively straight-forward to monitor and evaluate – outputs were either installed or they weren't.

All scheduled activities were completed or are due for completion by the end of the project timeframe. It should be noted that the evaluation team witnessed first hand the attempts to complete some of the installations during their field visit. Once again due to the restricted timeframe of the project it is difficult to see some of the impacts of this suite of activities (i.e. with installations only being completed in the final weeks of project implementation). However, although all of the installations have been completed, the evaluation team has to report that there have been some challenges at certain sites visited in the field. Whilst the evaluation team could not visit all installations, the water filter system at Phuoc Thuan Primary and Secondary Commune school, the well and water containers and water filter systems installed at two schools in Canh Vinh, the connection of Pho Trach village in Phuoc Thuan commune and a household water filter beneficiary in An Lang 2 Village, Canh Vinh commune were all inspected and the evaluation team have to report mixed impacts.

The installation of an extension pipe to Pho Trach village had been recently installed and effectively connects just over 200 households to the main water supply³. This installation was completed on time with no major complications reported, and the team witnessed an old lady villager using her new tap. To her and others in the village it presents a significant benefit since it means they no longer need to use the river water which is becoming increasingly saline and is also polluted by the leaching of pesticides and fertilizers. This is an important benefit and also clearly makes a difference in the daily lives of women in the project area so often tasked to collect water in the past (reducing non-productive time). This output therefore appeared to be successfully completed.



The evaluation team also visited Canh Vinh Commune Primary School 2 (a satellite of the main commune school) where the finishing touches were being applied to a well which would supply both the school and around 30 surrounding households. The well was being fitted with a pump in order to pump the water up to a container for the school.

At the main commune school in Canh Vinh, the project installed a water filter system and the evaluation team found that the water filter system was indeed in place and looked to be in good condition however there was no water and there hadn't been any water for the last 2 weeks. The headmaster reported that the problem was that the pump had broken. Thus schoolchildren must bring water to school as they did before. This is an unfortunate and unanticipated outcome and one for which the project cannot really be responsible for.

³ Liem Thuan village in Phuoc Thuan Commune was also connected to the main water supply and similarly there are no problems reported and similar benefits accruing to local people as in Pho Trach.

A similar problem was also witnessed at the Primary and Secondary School of Phuoc Thuan Commune where once again the water filter system had been installed but local schoolteachers and students were not benefitting from the installation as the filter system had broken down and had not been repaired for some time. The net result was once again that children were either using the teacher's originally existing supply or bringing their own. Thus at the time of observation the net impact of these project activities was nil. However it is recognized that this is only temporary and that once these maintenance problems are resolved there should be a positive impact.

One important point made by the Provincial Centre for Rural Water Supply and Sanitation was that due to the time constraints of the project, many of the installations were not being made at the ideal time of year i.e. it is better to dig wells during the driest time of year (July/August) so as to be able to determine the required depth of the well at the highest time of need. Indeed this simple point calls into question whether or not these will continue to provide the real benefit they were created for, although in fairness to the project implementation team, the activities were always planned for year 2 and the reduced project timeframe meant that ultimately there was little choice as to the timing of the installations. The reduced timeframe also meant there was little opportunity to observe impacts as well as address issues such as maintenance and repair as illustrated above.

It is difficult for the evaluation team to make any particular criticism of the project team since they have done nothing more than complete the agreed outputs with the added pressure of the reduced project delivery timeframe. The lesson to be learned here though is that time is required post-installation in order to tackle potential maintenance and repair issues and ensure that stakeholder beneficiaries have adequate capacity and resources to be able to maintain such installations properly.

This project, as has been mentioned previously did not intend to address issues of Sustainable Water Resource Management and through its components has dealt only with some of the immediate impacts of drought on local communities. In order for the project to adequately address the stated goal however it would appear that the way in which water resources are managed and used is a fundamental issue affecting communities with water shortages in Binh Dinh province. In the long term, local farmers will continue to suffer without proper analysis of the hydrological cycle, the impacts of certain land use and economic activities, the real *causes* of water shortage and drought, and the implementation of measures to control water consumption by a variety of users. It is however acknowledged that it would take longer than the project's timeframe to be able to address such issues.



As an example of an apparently uninhibited activity with potentially significant impacts on the local water supply, the evaluation team witnessed the extensive dredging of sand from the Ha Thanh river (running through Canh Vinh commune and Van Canh district) in order to make cement. This dredging has clearly been happening for a long time and has affected the course of the river substantially, making it considerably wider than it should be (and therefore possibly more susceptible to evaporation) in addition to the physical removal of water with the sand. Clearly the evaluators are in no position to make any sort of analysis on the actual impacts of this activity but it is an illustration of the need for a holistic and long term approach towards water, land use and natural resource management and planning in order to tackle the problem of recurrent water shortages.

It is understood by the evaluation team that the water supply component and the OFDA project as a whole never had the scope or any intention of dealing with water resource issues, and for this reason once again the evaluators cannot criticize the project. However a key lesson learned here is that addressing short-term needs is only a partial solution to the problems associated with drought such as lower yields, crop failures and income shocks and that in order to enable farmers to live sustainably with drought in the long term, the fundamental issue of how water resources are managed and used needs to be resolved as an integral part of a longer term approach.

4. Conclusion & Recommendations

The project as a whole has been managed and delivered effectively with all proposed direct investment for project beneficiaries utilized. This in itself is a remarkable achievement given the stringent time constraints of the project. The efficiency of delivery is in part related to the fact that the project endorsed an extremely participatory planning approach which also served to ensure that all interventions were agreed as priorities and therefore relevant and appropriate to poor farmers in the target area. As was illustrated in the previous chapter, the project has also delivered almost all of its intended outputs and many of the activities appear to have been successful, in particular the various agricultural models. In many cases the full impact of these interventions cannot be fully assessed as yet because the activities have only just been completed and therefore crops have not yet been harvested or clean water systems just being installed.

The early indications are however that the agricultural models almost across the board have increased or will increase production and as a consequence incomes for the demonstration farmers. Given the small number of key demonstration farmers, the real success of the project's livelihood interventions depends on the extent to which these models will be replicated both within and beyond the project's target communes. Certain models clearly have great potential for wider uptake. The Mongcai pig and Boer goat models both showed results that could encourage replication, and local people outside the immediate impact (interest) group showed significant interest in both these species. Other models have been successful in terms of demonstrating higher yields but wider uptake could be encouraged either by reducing the prohibitive investment costs (eg chilies and cattle fodder), or by addressing concerns regarding the confidence and technical capability of the key farmers to be able to coherently deliver the necessary training.

Any project will of course have its successes and challenges in terms of implementation. The main criticisms to be leveled at the project however are, that firstly the project activities do not fully enable the achievement of the goal. The selected activities contribute to the goal of enabling people to live sustainably with drought, but there is little consideration of how water resources are being managed and protected on a watershed level, a very significant contributing underlying cause of drought. The logical framework also never possessed sufficient indicators for measurements of improved or more sustainable livelihoods. Other relevant indicators for example might have been food security, production yields, and in particular environmental or natural asset-based indicators such as groundwater storage or river levels or area of land with sustainable land management practices. Overall the evaluators would therefore have to consider the logical framework as being rather poor but that the components and the constituent activities have in fact on the whole been well-planned, efficiently implemented, effective and are beginning to show some positive impacts.

The sustainability of certain interventions is however threatened mainly by the reduced project timeframe. In particular the lost opportunity for consolidating the DMAPs and participatory planning processes as well as the fact that the water supply component only just managed to make all the installations in time and without sufficient time for ensuring stakeholders had sufficient capacity and resources to maintain the investments.

The lack of any kind of baseline makes it extremely difficult to assess the project's impact at termination stage. A mid-term review is not considered essential for a project of this length. The lack of baseline data however is regarded as an oversight.

In summary though, the project has genuinely successfully demonstrated or piloted some approaches which have assisted or will help poor farmers to cope with some of the immediate impacts through the efficient completion of the components but it has not achieved the overall goal 'to enable poor households

to sustainably live with recurrent drought'. As mentioned above, this is more associated with the setting of an over-ambitious goal for the project timeframe and one to which the project components' only contribute towards in part.

The box below identifies interventions which are appropriate for immediate replication and refer mainly to the livelihoods activities. In many cases these are agricultural models which provincial authorities have a particular interest in promoting or rolling out in Binh Dinh, hence there is once again likely to be a high level of localized ownership and great potential for success and longer term sustainability. The Animal Husbandry Centre and Agricultural Extension Centre both appear to be stocked with committed, interested and very capable individuals. It is simply an issue that DARD currently lacks sufficient funding for significant uptake of these models. The evaluation team would recommend that if there is the opportunity for immediate replication, the same modalities be used i.e. the project structure (but with greater institutional capacity building and engagement at district levels) and the FFS approach (with a greater emphasis on training the key farmers in communication, facilitation and teaching skills).

Thereafter, a list of recommendations are presented which intend to suggest either ways in which the project could have more successfully achieved its goal or that might be considered in shaping a follow-on project or phase.

Models for Immediate Replication

Model	Justification
Arable Production Models	
Three to Two Rice Crop Models	One of the main achievements of the project's agricultural demonstration models was in successfully adapting the agricultural production calendar by changing farmer's cropping cycles from three rice crops per year to two with the growth of cash crops during the 'wrong' (drought) period. This production model is advocated by provincial policy based on the recognition that with the increasing occurrence of drought periods, livelihood security can be improved through improved rice production techniques during winter and spring crops, meaning that overall annual rice production is maintained or indeed improved by the planting of high yielding or drought resistant varieties (eg ML202 and VD8) as well as improved production techniques (in particular the better mixing and use of fertilizers and seed sowing densities). Meanwhile, the growth of cash crops in the summer provides poor farmers with a much needed source of income during a period of seasonal shortfall. A number of different cash crops may be grown during the summer and the project experimented with several including sesame, chili, peanut and maize. Other crops may also be appropriate and could be piloted according to local conditions and preferences, the important point here is the potential of the 3 to 2 crop rice model and the evaluators would indeed advocate a mixture of replication of successful project models as well as further experimentation with other cash crops.
Sesame Model	As can be seen from the evaluation findings in section 4.3.2, the use of the V7 and V36 varieties, coupled with training yielded impressive results and this could be a suitable model for replication in other upland communities in the province.
Peanut Model	The introduction of the TD25 variety was highly successful in terms of increasing incomes and would be appropriate for immediate replication
Maize Model	The project introduced a new hybrid variety C5252 which was successful in increasing yields. The evaluators would note that immediate replication should be accompanied with training on post-harvest storage and treatment.
Livestock Production Models	
Mongcai Pig Model	It is still too early to observe the full impact of this model but early indications suggest this could have great potential. The variety is extremely easy to raise and therefore offers farmers an excellent opportunity for improving incomes.
Chicken Model	There will always be a market for chickens and eggs and the project has successfully introduced chicken farming to a number of households or improved the production techniques of those who were already small-scale producers. Health and hygiene are extremely important considerations and further replication needs to continue to place this high on the training agenda.
Boer Goat Model	In terms of productivity, early indications suggest that this model will be very successful and could make an important contribution to incomes due to the higher price of this variety's meat. The evaluators would only like to advocate that any immediate replication of this model should be accompanied with greater consideration of grazing areas, as goats notoriously destroy upland watershed forest areas and seriously inhibit reforestation programmes, contributing to increased flooding, soil erosion and potentially drought conditions.
Cattle Fodder Model	The cattle fodder model is slightly exclusionary in the sense that as a precondition, farmers must have cattle and sufficient surplus land. However the results of this model were extremely successful in terms of almost halving the amount of time required for raising a calf to reach a saleable live weight. This would indicate that a farmer can sell more cattle in a given year. The sale of such large livestock is invariably a major contribution to annual incomes and therefore as such the potential of this model cannot be ignored. Additionally, the model promotes stall-fed cattle-raising and therefore also helps to reduce free-grazing, which as mentioned above can contribute to watershed degradation and soil erosion. This would be an appropriate model for immediate replication and with more time there may be possibilities for exploring other benefits such as the sale of elephant grass and/or milk.

Recommendations for a project of the same size and scope

Recommendation 1: *A longer timeframe*

Throughout the report the evaluation team have referred to a number of examples where the project impact has been constrained by the length of the project. In the majority of cases, many of the project objectives would have been better met and consolidated if the project had been implemented over the originally planned timeframe. To some extent therefore, this was unavoidable and related to issues surrounding the donor funding cycle. In terms of the actual delivery of components, the project did well to achieve what it did with the time constraints but there was little opportunity for follow-up, consolidation and the opportunity to observe impacts.

There are also other issues related to the achievement of the project goal, which would have been better achieved with a longer intervention altogether. These will be explored in greater detail in later recommendations which suggest the need for a more integrated approach towards drought mitigation and disaster risk reduction as a whole.

Recommendation 2: *Greater consideration of the logical framework and indicators*

The evaluators felt that the project's logical framework could have been better designed. A logical framework does not have to be anything too scary and can be a very useful tool for project visioning as well as monitoring and evaluation. The project had a project goal but this was not matched by component objectives (although some component objectives are included in the quarterly reports).

The project logframe only contained two income based livelihoods indicators, (one for agricultural models and one for the vocational model) and one health indicator. In addition to the project timeframe problem, these would not be sufficient indicators for demonstrating improved sustainable livelihoods. The project could have also used food security, yields, cattle/livestock weights and survival rates, expenditure, debts and could also have incorporated some KAB indicators. Understandably a relatively small project does not want an exhaustive list of monitoring indicators but a few others beyond incomes should be present, especially where the goal is to enable people to live sustainably. A few such indicators could easily be measured by a baseline and terminal evaluation survey.

Recommendation 3: *The need for a baseline survey*

In order to measure the effectiveness and impact of project interventions, there needs to be a baseline for comparison. The baseline should consist of a mixture of quantitative and qualitative data. It is also probable that such a survey would have also identified more substantial livelihoods indicators and thus respond to the above recommendation.

Recommendation 4: *The general project implementation structure was highly appropriate and should be maintained in future interventions focused on community-based approaches to drought mitigation or disaster risk reduction.*

There were a number of benefits to the general project implementation structure as mentioned in the report. The facilitative approach taken by CARE and the support of appropriate local service providers have provided a good model of how rural development interventions should work in Vietnam as a collaborative process with civil society organizations facilitating participation and working closely with state duty-bearers.

This project implementation structure could however better integrate district level line agencies and organizations (see recommendation 5).

Recommendation 5: The project's impact may have been increased through the closer engagement and involvement of district authorities.

As mentioned above, the project implementation structure was in general highly effective and appropriate. However, discussions with district level partners revealed that although districts were generally quite well informed about project interventions and progress, they were frequently not so involved in project capacity-building components and planning. The evaluation team believes that by engaging more (it is acknowledged that they were consulted in project design) with the district level at an early stage in project development, planning and implementation there may have been a greater opportunity for aligning goals and interventions with district government priorities and as a result may have been able to achieve a wider impact. For example, training and on-the-job experience in participatory planning and FFS approaches for district level staff may have helped better-achieve a wider impact i.e. with non-project communes.

The greater participation of the district level partners does however need to be managed carefully so as not to detract from some the achievements made in terms of grassroots planning – there needs to be an acknowledgement that the role of the district authorities is different (to commune level) and more strategic and that therefore they have different training needs and should be involved at different stages in planning processes. This point regarding greater district level engagement is taken up further by the following recommendation.

Recommendation 6: A wider level of uptake of the models may have been achieved with a greater focus on capacity building on knowledge transfer by key farmers

The project appears to have had a reasonable uptake from neighbouring farmers, an average of 7.9 households (from interview data) taking up new models based on demonstrations across the three project communes. It is also likely that greater uptake will occur in the future since in a number of cases, neighbouring farmers have only just observed the successes of demonstration farmers. However several key demonstration farmers stated that they did not feel confident enough to pass on their knowledge effectively. If the project had spent just a little more time in trying to teach these farmers how to transfer their knowledge, the results may have been more impressive.

Recommendation 7: Beneficiaries receiving water and sanitation installations should have been taught how to fix problems themselves

Based on field visits to inspect numerous water and sanitation installations, the evaluation team came across several problems affecting the function of these systems. As a consequence the beneficiaries were then dependent on the company that installed them to come and fix them. Unfortunately this company is based in Saigon and of course it costs money for their maintenance services. Money and time spent on training appointed individuals to maintain these installations would have been well-spent.

Recommendation 8: A greater emphasis on markets

The project logframe suggested that one of the main methods of enabling local farmers to live sustainably with drought was to improve incomes. Although the majority of agricultural models piloted were quite

successful in terms of raising yields, the project carried an assumption that greater yields, equals greater income. In some cases this was not really the case eg. the hybrid rice variety piloted in Phuoc Thuan due to the fact that the new rice variety has a lower price. In other cases, it is probable that higher yields have or will indeed raise incomes assuming the farmers can easily get their products to market. It would have been a relatively inexpensive activity to conduct a market analysis before the implementation of the models and to continue monitoring prices and market absorption of the new varieties. At the present time, largely due to the fact that in many cases the new products have not yet reached the market, it is not really possible to state objectively that the project has not succeeded because of a lack of consideration of markets but rather it would seem logical to consider markets when trying to improve incomes and therefore relevant activities should have been built into the design.

Recommendations for a Future Phase or Intervention elsewhere:

Recommendation 9: Future phases of the project may consider rolling out most of the agricultural and livestock models maintaining the FFS approach.

The agricultural and livestock models as reported in the evaluation findings section seem to be highly suitable for wider uptake and replication. Whilst, it is still a little early to see the full impact, the indications are very good and these may make an important contribution towards drought vulnerable farmers in the South Central Coast region. An initial pre-feasibility study for a follow on intervention should revisit the project area for an ex-post examination of the project models and their success and uptake. Assuming that such models are as successful as they appear to be now, the evaluation team would advocate supporting the roll out of these models.

The FFS approach is a highly appropriate method of knowledge and technology transfer providing the opportunity for maximised impact and should be maintained in rolling out the models to new communes/districts. As suggested in other recommendations here, the evaluation team would advise a greater level of support for key farmers in teaching the new models as well as greater institutional involvement from district level line agencies for an even greater or wider impact.

If a future phase is longer as recommended here, the project should also consider assisting farmers to access credit to support investment in the models. This may be in the form of improving credit service delivery of Vietnam Bank for Social Protection or People's Credit Fund or through direct microfinance support from the project. It is appreciated that this was not realistically feasible within the current project's timeframe and would have added further complexity.

Recommendation 10: Future phases of the project or interventions of type should incorporate greater institutional strengthening for sustainability and wider impact

This recommendation follows from recommendation 5 and springs from discussions at the provincial level with DARD who have concerns about the ability of staff at commune and district levels to be able to roll out and replicate approaches at non-project sites. This was repeated by several partners at provincial level with reference to both the agricultural models as well as the DMAPs. A longer term more consolidated phase 2 or a subsequent project may consider taking more of a focused institutional capacity building approach.

Recommendation 11: *Future phases of the project or interventions of type should consider taking a more holistic approach towards resolving the issue of water shortages for farmers through sustainable management of local watersheds.*

The problem of drought (and therefore the justification of the project and its interventions) in Binh Dinh was defined primarily as an agricultural issue i.e. that low levels of precipitation meant that farmers suffered from water shortages. There are however a number of causes of water shortages and there are numerous potential solutions towards improving access to water and therefore mitigating the impacts of drought. Improving agricultural production through the introduction of more drought resistant production techniques and varieties is definitely one important factor but there are other issues which were not considered in design or implementation, in particular how water is being used and the issue of improved watershed protection. Reforestation of bare and degraded hills may have been a component activity for example.

Through a more comprehensive and integrated approach the project could have explored the opportunity to integrate specific drought mitigation actions with government plans and programmes within the SEDP. CARE would then look to play a role whereby they look to add-value to the existing programme, for example by training government staff and communities in participatory approaches to irrigation planning and construction. Thus although it would be the government programme that physically provides the irrigation canals, through technical support from CARE in participatory approaches it would be possible to ensure that it is the most poor that benefit from the intervention. Experiences from other parts of Central Vietnam have demonstrated that it is often unequal access to water resources that is a key intermediate cause of poverty i.e. richer farmers are often the ones who get their fields irrigated first. Similarly the 661 and 147 programmes provide incentives for forest protection and development including reforestation of bare and degraded lands. Once again the government may provide the budget but CARE could have a role in facilitating the approach – adding value at grassroots level implementation. In this way a CARE project could leverage support at provincial and district levels for dealing with the issue of water shortages for farmers in a comprehensive and integrated fashion.

Thus a range of different relevant stakeholders and government departments are involved in a coordinated plan through which drought preparedness and mitigation would be mainstreamed. In actual fact since many of the project communes also suffer from floods during the rainy season it would be more logical to mainstream disaster risk reduction and mitigation as opposed to only tackling drought.

This kind of approach however requires working at a higher level with DPI, various line agencies of DARD including the Storm and Flood Committee, Department of Forestry, Forest Protection Department (as well as the agencies already involved), DONRE etc at provincial and district levels. It is appreciated that this goes well beyond the scope of what the OFDA project attempted to do i.e. beyond providing short term humanitarian assistance. Thus the recommendation should be relevant to either potential future phases of the project or where similar interventions of type are being planned elsewhere. It should also be noted that it would require a longer timeframe due to the level of coordination required with various government departments and line agencies.

Recommendation 12: *Greater consideration of the environmental impact of activities.*

In many ways this recommendation relates to the more strategic approach (advocated above) which would consider impacts on the natural/water resource base. Specifically this comment responds to the goat breeding component which did not consider the potential environmental impact on upland watersheds in promoting goat breeding without any restrictions on foraging areas. However the same philosophy could also be applied more broadly to examine different land uses and examine their environmental sustainability

particularly with reference towards soil and water conservation and the resultant availability of water for poor farmers.

Recommendation 13: Future project interventions should go beyond drought mitigation towards reducing vulnerability to disasters through climate change and adaptation strategies

Climate change and adaptation is a hot topic in Vietnam at the moment and there is a growing body of evidence to suggest that the rural poor in Southern Central Vietnam are becoming increasingly vulnerable to the effects of climate change. A future CARE project in Binh Dinh or the region might consider looking at a variety of impacts as opposed to only droughts. For example the increasing occurrence of floods and/or saline intrusion were also repeatedly mentioned as very real threats to livelihood security in the project communes. Interviews with project partners also indicated that they were already beginning to consider adaptation strategies such as converting rice farmers into shrimp farmers on account of rising sea levels and greater saline intrusion further inland. Therefore there may be other relevant and appropriate interventions for many poor farmers in the target area beyond drought mitigation measures. It should also be noted that by adopting a broader approach in project design and planning, there are certain interventions which may serve to tackle both drought and flooding-related problems eg. afforestation/reforestation of degraded hillsides or the installation of irrigation canals, dams, and dykes intended to save and store water from flooding periods for use during periods of water shortage.

ANNEX 1: Evaluation Workplan

CARE IN VIETNAM					
DROUGHT - OFDA					
06 Nguyen Trung Truc, Qui Nhon City, Vietnam Tel/fax : +84(0)56 3946 217/3926220					
SCHEDULE OF FINAL EVALUATION (INDEPENDENT CONSULTANCY)					
Date	Time	Content	Partner / Participating member	Evaluating group	Remark
4-7/5/09		Desk Review	Consultant		Bang to send documents
7/5/09		Work with Project team	Consultant+ Project team		
8/5/09	8:00-11:30	Work with Canh Vinh People committee	Commune leader, Women Union, Farmer Association, Farmer, core group(5-7 people)	Group A	
	8:00-11:30	Interview households in CV commune	20 household in 03 villages; 7 households/village	Group B	
	13:30-16:30	Discuss with district CIT (Van Canh)	Agriculture Department, district Women Union, Farmers	Group A	
	13:30-16:30	Continue to interview households in CV commune	20 households of other village		
9/05/09	8:00-11:30	Work with My Phong People committee	Commune leader, Women Union, Farmer Association, Farmer, core group(5-7 people)	Group A	
	8:00-11:30	Interview households in MP commune	20 household in 03 villages; 7 households/village	Group B	
	13:30-16:30	Discuss with village group		Group A	
	13:30-16:30	Continue to interview households in MP commune	20 households of other commune (My Loi)	Group B	confirm with new commune, Mr Ky (vice chairman of My Phong) will support us
Sunday	Nghĩ				

11/5/09	8:00-11:30	Work with Phuoc Thuan People committee	Commune leader, Women Union, Farmer Association, Farmer, core group(5-7 people)	Group A	
	8:00-11:30	Interview households in PT commune	20 household in 03 villages; 7 households/village	Group B	
	13:30-16:30	<i>Discuss with district team (District Agricultural Extension, district Women Union, district Farmer Accosiation)</i>	Tuy Phuoc	Group A	
	13:30-16:30	Continue to interview households in PT commune	20 households of other commune (Phuoc Son)		confirm with new commune, Mr Phuong (vice chairman of Phuoc Thuan) will support us
12/5/09	8:00-11:30	Work with Provincial Agricultural Extension	Leader, technical staff, officers	Group A	Richard - Assistant (and Đào)
	8:00-11:30	Work with Provincial Animal Breeding Centre	Leader, technical staff, officers	Group C	Đào- Lập (or Trúc)
	8:00-11:30	Continue to interview households (if necessary)			Trúc + local officer
	13:30-16:30	Work with Centre of Rural Clean Water and Environmental Sanitation	Leader, technical staff, officers	Group A	Richard - Assisstant -Trần
	13:30-16:30	Work with Provincial Women Union	Leader, technical staff, officers	Group C	Đào- Lập
	13:30-16:30	Continue to interview households (if necessary)		Group B	Trúc + local officer
13/05/09	8:00-10:30	Work with DARD	Leader, technical staff, officers	Group A + C	Richard+ Lập + Đào+ Translator
	10:30-11:30	Result Collection and Analysis			

	15:00-17:00	Result Collection and Analysis		Group A + C	
14/5/09	8:30-11:30	Discussion in project team			Bằng + Richard + Lập
	13:30-16:30	Travel to Hanoi, Hue			
18-20/5/09		Preparation of workshop presentation	Richard		
21/5/09		Travel to Binh Dinh	Richard		
22/5/09		Project Closing Workshop – Presentation of Key Findings - Rtn to Hanoi	Richard		
25/5/09-31/5/09		Data Processing & Report Writing	Richard & Lap		
Local officers(province,district, commune) involving in the trip will receive support cost according to project rate. Households involving in the interview also receive support cost from project					
Remark	Group A	Richard - Translator - Đào			
	Group B	Lập - Trúc - Trân - Tùng - Sang - Phát - Hà -			
	Group C	Lập - Đào (or Trúc) - Depend on work			
Project team CARE OFDA:					
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	Nguyễn Thị Tố Trân , Local coordinator				
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ANNEX 2: TORS

CARE INTERNATIONAL IN VIETNAM

TERMS OF REFERENCE FOR AN INTERNATIONAL AND ANATIONAL CONSULTANT

END PROJECT SURVEY EVALUATION STUDY – BINH DINH PROVINCE



Project:	Drought preparedness and mitigation to support communities to sustainably live with recurrent droughts
Location:	Three communes of three districts in Binh Dinh Province, Vietnam
Duration:	32 days from 6 May, 2009
Key counterparts:	Department of Agriculture and Rural Development of Binh Dinh and Its Sub-Departments, Women's Union, Red Cross, Five districts and CARE Project Team,
Reporting to:	CARE Country Director or Delegated officer

CARE in Vietnam is the representative of CARE International in Vietnam. CARE in Vietnam operates under the lead membership of CARE Australia. The laws and regulations of the Government of Vietnam apply to all staff, contractors and consultants. Within CARE in Vietnam the Country Director has overall management authority as the representative of the lead member and of CARE International.

A. Background information

Over the past 18 months CARE has been working with communities and local authorities to implement Community led Drought Mitigation (Drought-OFDA, is a regional two year program running from September 2007 to May 2009, in three projects across East Timor, Vietnam and Cambodia. The project is funded by USAID/OFDA: Office of U.S. Foreign Disaster Assistance Headquarters in Washington, D.C. The goal of the program is to enable poor households to sustainably live with recurrent drought.

Within Vietnam, the project is implemented in three communes of three districts in Binh Dinh province. The goal will be achieved through outputs from activities within three intervention areas:

- (1) Capacity building on drought preparedness and mitigation and strengthened interoperability through institutional linkages
- (2) Livelihood improvement through efficient and sustainable use of limited resources and;
- (3) Water and sanitation related activities on low cost water technology and usage.

The project will be completed at the end of May, 2009. In order to verify and quantify the outcomes and effects (and potentially impact) of the project, CARE in Vietnam is commissioned a final project evaluation. The evaluation shall be led by external consultants with the full cooperation and support of the project team at CARE.

B. Scope of services

The Consultant will work with CARE in Vietnam's project team and support staff to conduct the evaluation study. The main objective of the project evaluation is to assess the outcomes of the activities against the project objectives. The works include two assignments as below:

- (1) Conducting project survey (quantitative assessment) to assess results compared to the original verifiable indicators, as set in the intervention framework
- (2) Conducting final evaluation (qualitative assessment) to assess results, outcomes and impacts of the project.

The project covers three intervention components, included: (1) community capacity building to cope with drought, (2) livelihood improvement supported through appropriate efficient agriculture and livestock and; (3) water and sanitation for community and targeted school.

Objectives

The evaluation will have a participatory nature and is focused on the following key aspects related to the project achievements:

- The actual results compared to the original verifiable indicators, as set in the intervention framework
- Relevance / appropriateness of the project design, to what extent the project is suited to the particular needs, expectations and priorities of the target communities, local authority, implementing partners and the donor
- Efficiency in use of resources, to what extent the project used the resources in the most economical manner to achieve its objectives
- Effectiveness and quality of project interventions, did the activities achieve satisfactory results in relation to stated objectives. A special focus should be given on community disaster preparedness and mitigation measures in responding to the recent drought
- Impact, are the results of the intervention - intended and unintended, positive and negative - including the social, economic, environmental effects on individuals, communities and institutions.
- Sustainability, are the activities and their impact likely to continue when external support is withdrawn, and will it be more widely replicated or adapted

Key activities

- Background reading, briefing discussions with project team and preparation of resource materials
- Development of an evaluation study design (plan), identification of information needs, drafting data-gathering instruments
- Data-collection at the field level including participatory evaluation methods

- Data processing, analysis and draft report preparation
- Presentation of the evaluation results to project team and partners at a workshop
- Finalization of evaluation report following comments received from CARE on the draft report

Methodologies

The final evaluation schedule will be determined following discussions between the consultant and the project team prior to the commencement of the evaluation study. The evaluation study design (plan) and tools will be approved by CARE prior to implementation. In working with partners, the consultant is expected to be proficient in using a range of participatory tools for data gathering and analysis, including quantitative and qualitative survey techniques, conducting key informant interviews and leading small group presentations. The consultancy will also involve substantive documentation review, report writing, and workshop presentation.

Expected outputs

- A comprehensive report in English and Vietnamese detailing:
 - findings
 - lessons learned
 - Recommendations for further improvement.
 - Concise presentation of the main findings, lessons learnt and recommendations to be presented at the end project workshop in May 2009 (planned in 28 May, 2009)

Title Page

Executive Summary

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2. *Description of the methodologies used*
3. *Evaluation findings*
4. *Lessons learned*
5. *Recommendations*

Annexes:

- Evaluation work plan*
- ToRs of the evaluation*
- List of those interviewed*

C. Selections criteria / qualifications

- Have extensive experience, knowledge and skills on impact assessment and evaluations. Particularly, demonstrated competencies in quantitative and qualitative research, evaluation tools development, data collection and analysis, and highly developed report writing skills.
- Have a background and experience in rural livelihood or household economic assessment.
- Have a background and experience in efficiency livestock and agricultural development
- Experienced in community based disaster risk reduction program and activities
- Experienced in assessment of social behavior change, individual perception and impact of community trainings /capacity building activities.
- Familiar with the rural development context in Vietnam.