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Mid Term Evaluation of Climate Smart Agriculture: Capturing the Synergies between Mitigation, Adaptation and Food Security in Malawi, Vietnam and Zambia – GCP /INT/139/EC

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Composition of the Evaluation Team

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Acronyms

ADB	Asian Development Bank
ASWAp	Agriculture Sector Wide approach
BTOR	Back-to-Office Report
CASU	Conservative Agriculture Scaling Up
CAADP	Comprehensive Africa Agriculture Development Programme
CBA	Cost-Benefit Analysis
CC	Climate Change
CCAFS	Climate Change Agriculture and Food Security
CGE	Computable General Equilibrium
CGIAR	Consultative Group on International Agricultural Research
CIAT	International Centre for Tropical Agriculture
CO	Country Office
COP	Conference of the Parties
CSA	Climate Smart Agriculture
CSOs	Civil Society Organizations
DFID	Department for International Development
EC	European Commission
EPIC	Economics and Policy Innovations for CSA
ES	Economic and Social Development Department
ESA	Agricultural Development Economics Division
ET	Evaluation Team
EU	European Union
EX-ACT	Ex-Ante Carbon-balance Tool
FANRPAN	Food, Agriculture and Natural Resources Policy Analysis Network
FISP	Farmer Input Support program
FRA	Food Reserve Agency
GDP	Gross Domestic Product
GHGs	Green House Gases
GIS	Geographical Information System
GRMS	Global Resource Management System
HQ	Head Quarters
ICEIDA	Icelandic International Development Agency
ICRAF	International Center for Research in Agroforestry
IDA	International Development Association
IFPRI	International Food Policy Research Institute
IMF	International Monetary Fund
IPSARD	Institute of Policy and Strategy for Agriculture and Rural Development
ITTF	Interdepartmental Technical Task Force
JICA	Japan International Cooperation Agency
LOA	Letter of Agreement
M&E	Monitoring and Evaluation
MAL	Ministry of Agriculture and Livestock
MARD	Ministry of Agriculture and Rural Development
MDGs	Millennium Development Goals
MGDS	Malawi Growth and Development Strategy
MoA	Ministry of Agriculture
MoAFS	Ministry of Agriculture and Food Security

MoECCM	Ministry of Environment and Climate Change Management
MTE	Mid-Term Evaluation
NAMAs	Nationally Appropriate Mitigation Actions
NAP	National Agricultural Policy
NAPCC	National Action Plan on Climate Change
NAPA	National Adaptation Plan for Action
NCCP	National Climate Change Policy
NGO	Non-Governmental Organizations
NMR	Northern Mountainous Region
NMTPF	National Medium-Term Priority Framework
NOAA	National Oceanic and Atmospheric Administration
NOMAFSI	Northern Mountainous Agriculture and Forestry Science Institute
NORAD	Norwegian Agency for Development Cooperation
NTC	National Technical Coordinator
ODA	Overseas Development Assistance
OED	FAO Office of Evaluation
PC	Programme Committee
PMU	Project Management Unit
PoA	Plan of Action
PRODOC	Project Document
PRSPs	Poverty Reduction Strategy Papers
PSC	Project Steering Committee
PT	Project Team
RP	Regular Programme
SADC	Southern Africa Development Community
SAM	Social Accounting Matrix
SIDA	Swedish International Development Cooperation Agency
SLM	Sustainable Land Management
SNDP	Sixth National Development Plan
ToC	Table of Contents
TOR	Terms of Reference
ToT	Training of Trainers
TUAF	Thai Nguyen University of Agriculture and Forestry
UN	United Nations
UNDAF	United Nations Development Assistance Framework
UNDP	United Nations Development Programme
UNFCCC	United Nations Framework Convention on Climate Change
UNICEF	United Nations Children's Fund
USAID	United States Agency for International Development
WB	World Bank
WFP	World Food Programme
WHO	World Health Organization

Executive Summary

ES1. This mid-term evaluation (MTE) reviews the progress made towards achievement of outcomes of the project "Climate Smart Agriculture: Capturing the Synergies between Mitigation, Adaptation and Food Security in Malawi, Vietnam and Zambia" in accordance with the project document (PRODOC), and recommends corrective actions. The objectives of this MTE is (i) to assess the project from its concept and design to current and potential results and impact; (ii) to include recommendations for filling gaps not yet covered by the project; and (iii) to provide a basis for learning and accountability for managers and stakeholders and serve as an input on how to up-scale the project effectively and further refine the methodology being used, as appropriate.

ES2. The MTE assesses the following: (i) quality, usability and relevance of the primary and secondary data being gathered for identifying genuine and feasible climate smart agriculture (CSA) options; (ii) adequacy, effectiveness and capacity of analyses and models being employed to produce the desired evidence base; (iii) effectiveness of institutional capacity building towards CSA-sensitive policy within country governments; (iv) project's strengths and capabilities to link research on CSA to policy-making (v) scope and opportunity for simplifying data gathering, analysis and requirements, and economic modelling for upscaling and replication purposes.

ES3. The MTE was undertaken at the start of the final year of the project due to delay in formal inception. The MTE critically assesses the project using OED evaluation criteria (relevance, efficiency, effectiveness, impact and sustainability) and compliance with UN and FAO programming principles. The evaluation team carried out extensive documentary analysis of internal documents and external publications and semi-structured interviews at FAO HQ, followed by a ten day team mission to Zambia and Malawi. A mission to Vietnam was not feasible due to the evaluation budget but telephone interview data sufficed.

Context

ES4. The three year project (Jan 2012-Dec 2014), led by the FAO Economics and Policy Innovations for Climate Smart Agriculture (EPIC) Programme, is EU and FAO co-funded, with a value of €5.5m. The project links agricultural development and climate change, with an expected outcome that "**the capacity to undertake and finance climate smart agriculture is strengthened in the three partner countries"**. The following outputs are expected from all partner countries: (i) An evidence base for identifying, developing and implementing practices, policies and investments for CSA is built; (ii) Country-owned strategic frameworks for CSA activities are formulated; (iii) CSA investment proposals are formulated and possible financing – including from climate finance – is identified; (iv) Capacity for evidence-based planning, implementing and financing CSA is built. Partner country contexts differ: Malawi is extremely poor, with low human development and very high reliance on agriculture (80% workforce in agriculture); Zambia is less poor, with 50% of the workforce in agriculture and low agricultural productivity; Vietnam is now a middle income country, with a predominantly rural population (73%) and high levels of rice exports; Vietnam's project areas focussed on the poorest Northern Mountainous Region. In all three countries the agricultural sectors are highly vulnerable to climate change.

Analysis of concept and design

ES5. The project strategy describes a clear logic for achieving its outcome, including a research process (evidence base with policy simulation models, CSA technique adoption

analysis) and policy process (institutional analysis, coupled with fostering dialogue with national government ministries). These components are expected to combine to achieve the project aim of creating a climate smart agricultural investment strategy approach in the partner countries. The project objectives are 'quite coherent' with expressed national priorities and policies and 'very coherent' with farmers' needs and other donor programmes. The project is very timely in most of the partner countries for this integration work between agriculture and climate change. However, the strategy for choice of countries was not well articulated, and has meant that in implementation, the geographically proximate countries have worked better together (Malawi and Zambia) than with Vietnam. Most of the focus has been on national level in this project, which is a necessary starting point. The ET finds that the issue of institutional effectiveness at local level has not been fully considered in the project design, although the Vietnam case, which has a regional focus, will be able to provide insights with this regard. In the three countries, institutional mapping combined with institutional data analysis is providing guidance on how to fulfill this objective. Given the ongoing processes of decentralisation in the partner countries, capacity building at this decentralised level is an important element to foster further.

Analysis of implementation – project management, financial resources, institutional arrangements

ES6. Project management has been carried out effectively throughout this project, with high calibre staff employed both at international level (project management and technically specialist staff) and in the partner countries (technical coordinators). International consultants have been used to complete some technical activities on some of the project components. The project teams undertook several country visits to date, and records have been kept effectively, with well-documented project history. The most important issue with project implementation has been the delays incurred in the inception of the project. Due to political process delays in ministerial approval, all partner countries experienced a delay of 6-12 months in inception, with major knock-on implications for the execution of the ensuing deliverables. Some delays were also experienced with the uptake of the university capacity building elements of master's students' research grants due to administrative hurdles.

ES7. Financial resources have been overseen and reported with clarity throughout the project. A budget revision was approved at FAO's request, in order to reallocate some minor budget lines. About 50% of the total budget was allocated to salaries and consultancy fees, in line with planned activities. As of March 2014, 80% of the budget has been spent. A wide base of institutions was involved with the project from inception, reflecting FAO's extensive networks internationally and nationally. National universities and specialist institutes were contracted in addition to CIAT and ICRAF for specific activities.

Analysis of results and contribution to objectives

ES8. *Output 1:* The evidence base created included a meta database of household datasets with related statistical analysis (analysis ongoing); papers on key lessons from existing evidence; reviews of CSA practices (adoption, yields, socio-economic impacts); soil sequestration (delayed); a conceptual framework for identifying CSA strategies including a farm-level model for farmers; model analysing broader sustainable land management practices; and a general *equilibrium* model (unclear how CSA will fit into this model).

Output 2: Programmes, policies and institutional frameworks for adoption of CSA practices have been investigated through policy analysis and review, with reports varying from fair to excellent in quality. A thorough Cost Benefit Analysis is still to be undertaken. Policy dialogue

fostered through the project with a view to integrating climate change and agriculture policy has had different levels of success, depending on the initial context in country in terms of policy drafting stage.

Output 3: Climate Smart investment proposals formulated – this activity is still to be undertaken.

Output 4: Capacity has been built in partner countries for climate smart agriculture through facilitating dialogues between government ministries; supporting agriculture ministry officials to attend the UNFCCC meetings with a specialist FAO team member; financial support for MSc and PhD studentships on CSA and training of stakeholders in country on carbon accounting and scenarios; also training enumerators in interview techniques.

ES9. These outputs have contributed to objectives of the project in the following ways. The evidence base has been increased on CSA in the partner countries. In-country capacity to implement a CSA strategy has been built in activities developed through the project. An increase in policy documents linking climate change and agriculture has been noted. In Malawi the most recent draft of the agricultural policy included climate change as a cross cutting issue for agricultural policy. In Zambia draft climate change and agriculture policies were unavailable for the evaluation team's external review. However, officials verbally advised the Evaluation Team that, following a facilitated dialogue process, these documents now take both agriculture and climate change into account. Vietnam's policy situation is different – a regional focus of the project has meant that capacity building has focussed at this level and not at the higher level of national policies.

Analysis by evaluation criteria

ES10. The CSA project took less account of gender in concept and design than the Evaluation Team would have expected, given FAO's focus on gender, the prominent gender differences in agriculture and farming and the uptake of new technologies, and policy impacts, which are now well known. In analysis, there is more reflection on gender components of this work.

ES11. Capacity development was undertaken at individual, organisational and wider 'enabling environment' level in this project. These components are a major focus of the project and have been undertaken effectively, though the elements do not cohere entirely; more stakeholder integration is needed alongside dissemination of results.

ES12. A strong Human Rights based approach has been a fundamental tenet of this project as it deals with food security and policy for the most marginalised. Partnerships and Alliances are for the most part strongly fostered, with the exception of other donors in country.

Relevance:
ES13. The project is broadly in line with partner country government strategies, although the CSA concept was unknown to these governments. The project is in line with priorities of the UNDAFs/One UN/NMTPFs and in line with FAO's strategic objectives SO1 (food security eradication), SO2 (agriculture productivity increase) and SO5 (resilience from disasters).

Efficiency:
ES14. Management and implementation through the project were judged good to excellent, with sensible remedial measures taken by the project team, indicating good communications

and clear line management. Staff calibre involved in the project is extremely high. Budget allocations have been largely adequate, although a little more country-level administrative support would have been useful. However, the timing of inception of activities was incorrectly estimated, and there was no remedial measure for this to apply, leaving the project behind in its activities since the start. Some internal review processes have dragged. The final exit strategy of the project is not well conceptualised currently; partly because staff are very focussed on production of mid to end term sets of deliverables.

Effectiveness:
ES15. The evidence base has components which are individually, but not yet collectively, effective, in progressing towards a climate smart agriculture framework for the partner countries. At present the three models are not yet linked. It is not clear how this will be upscaled from this work at this time.

Sustainability:
ES16. The economic and social sustainability of the project are currently considered inadequate. The project has no plans in place for further funding, and the ongoing nature of policy negotiations and links with ministries mean that a break in impetus may cause a slowdown in interest and ability to focus on CSA issues. The PT mentioned the possibility of new funding, but that this is still uncertain (especially the timing) and could cause a funding gap that would lead to a loss of the capacity built in the countries. Capacity has been increased, albeit in a thin-layered base in some ministries.

Impact:
ES17. Impact on policy change has been recorded; some significant changes have been made. An evidence base has been created. However, the overall impact of the project in terms of creating enabling conditions for finance of CSA projects cannot be judged at this point as these outputs have not been produced. This will be assessable at the end of the project term.

Conclusions and lessons learned

ES18. The project has contributed to increased awareness of climate change and agriculture at national policy level in-country, with some clear evidence of progress in integration of these areas. The combination of the collection of a meta-database and country-specific literatures has provided a strong foundation for developing an evidence base for policies and investments for CSA. The CSA Project Team collected and analysed data and synthesized the literature on CSA. Their activities highlight the limitedness of available evidence. The simulation for the farm-level and public goods model provides, or is likely to provide, useful insights into CSA adoption behaviour among farmers.

c

ES19. Some delays in the activities on developing an evidence base for CSA raise concerns about the ability of the project to deliver within the current timeframe. A second and more complicated issue is one of coherence. At present, it is unclear how the different components of the project evidence will be effectively synthesized into a coherent whole CSA strategy as originally envisaged. The lessons learned and recommendations provide suggestions from the Evaluation Team as to how to address these issues sufficiently in order to ensure the project's successful completion.

Lessons Learned

ES20. **Lesson 1: Entering the political arena in countries is tricky, delicate and can be time-consuming.** The Project Team has demonstrated considerable success in terms of encouraging policy change in Malawi and Zambia through different strategic approaches to specific contexts. This has required well-positioned staff in country who is able to maintain networks with those in the government ministries and other organizations over time, often bringing these networks from their previous roles. With a short life project of three years it is possible to have a delay of one year whilst awaiting a mandate for activity. In this case, it can impact the ability of the project to achieve its original aims fully. So having the right people who are able to understand and negotiate the policy process quickly and effectively is a critical element. Project planning should allocate adequate timing to building the right country level engagement and identifying best partners to engage.

ES21. **Lesson 2: Capacity building on policy at local level merits more attention.** Currently, the focus on policy change in agriculture and climate change is at the national level as this is where decisions on funding are taken, and investment that is then implemented at district and local level. But the construction of an evidence base at local level needs to be accompanied by an equal effort to move from developing strategies at the international and national level to their implementation at the district level. In this way, national level policies will be connected to the evidence base, and people will start to understand and work with the issues at local level. Institutional mapping at local level and national level, combined with institutional data analysis is fundamental in providing guidance on how to fulfill this objective.

ES22. **Lesson 3: More scope needed for private sector engagement.** Public sector engagement is critical to the project's success, and increasingly, projects on CSA should adequately consider the role of the private sector, i.e. the agribusiness sector producing and distributing inputs as seeds and fertilizers, and the role of smallholders as private sector small scale commercial producers. This is likely to be an important player in the development and implementation of responses to climate change in agriculture. This is true for areas such as the supply of inputs as improved seeds and other technologies, but it is also possible for the role that the private sector can play related to carbon finance actions.

ES23. **Lesson 4: High quality research deliverables deserve significant dissemination time planned into project lifetime.** The project is succeeding in producing a large number of deliverables, many of which are of high quality. The lesson learned is that there needs to be a long 'lead out' time allocated for the dissemination of high quality output deliverables to ensure that they will be disseminated fully within the lifespan and funding of the project.
Lesson 5: Future replication or upscaling of the project (if funds were available) will need to be capacity-strengthening at national level for the use of models in order to promote greater national ownership. Repeating the economic model would be unnecessary, but a minimal amount of data gathering and analysis would be required. This would require gathering secondary data as has been done in these cases and ideally replicating the CBA process with targeted data collection to see where the returns to CSA are most likely.

Recommendations

Recommendation 1: To the Project Team and the Donor for <u>overall project outcome success</u>

Extend the project for a period of six months in order to strengthen the sharing of information and learning in country, the coherence of the project results and in order to achieve the overall outcome of the project.

Recommendation 2: To the EPIC team for <u>improving the evidence base</u>

a. Adjust the CGE model to explicitly include CSA adoption, and directly link the CGE simulations to the outputs from the farm-level and public goods model simulations in order to assess if widespread CSA adoption will have economy-wide effects.

b. Consider the link between the different levels of analysis and models and provide a single document summarizing and synthesizing into a coherent set of recommendations the insights provided by the analysis and models.

c. Consider what future information and data collection would be appropriate for expanding the understanding of CSA adoption both in the selected countries and elsewhere. This is likely to involve expanded general data collection, but also impact evaluations of CSA projects that will be implemented in the field to determine lessons that can be learned.

d. Validate at country level the results from policy models with local experts.

ES24. Regarding the investment proposals that will be generated, it is important that the EPIC team focus on their internal coherence and realism, and also how they could be easily and clearly shared with others.

Recommendation 3: To the EPIC team for improving the investment proposal in its coherence and ability to be implemented

a. Take into account in the proposal the availability of new technologies, e.g. improved seeds at the farm level. A broader consultation with private sector stakeholders would help to understand this context.
b. Integrate the investment proposal generated by FAO into existing investment plans for climate and agriculture. This means some degree of cooperation and stakeholder engagement is required now and planning for how this will be taken forward in the period after the project.
c. Assess the funding possibilities for the proposals by the end of June 2014 and ensures a plan is in place, with adequate staff time allocated, to seek an audience with strongest potential donors and request funding. In-country follow up of the proposals would also benefit from greater involvement of the FAO Country Representatives in the final stage of the project, considering their participation in various institutional fora on CC and agriculture and their cooperation with other donors in other related on-going projects.

ES25. The ET suggests that a focus on capacity building in country would increase: i) the number of project beneficiaries; ii) the social sustainability of the project; and iii) impact on human capital. Currently CSA is not reflected in implementation at local level in country.

Recommendation 4: To the EPIC team for improving capacity building in country

a. Extend the training in the use of the CSA manual to trainers belonging to private organizations/agencies including farming unions and NGOs.
b. Follow up by country coordinators with local level decision makers to increase awareness and address the issue of policy capacity-building at local level.

ES26. For reasons discussed earlier in this report, the national universities were delayed in setting up the funding for the Masters and PhD students as part of this project. The capacity building work with students has been administratively time consuming – however the ET considers that this is potentially an important capacity building activity, and is keen to emphasise that capacity building impacts from this will become fully apparent only at project end/after the project end.

Recommendation 5: To the EPIC team for improving project deliverables from the National Universities

a. Disseminate proposal content and preliminary research findings, if available, before the project end date in-country through key stakeholder meetings.
b. Undertake policy brief writing training before project end date to assist students in this challenging undertaking.
c. Install adequate financial administrative arrangements are agreed with the University as activities will be concluded after the project end date.

Recommendation 6: To the EPIC team for integrating soil sequestration data

Put in place all the possible efforts to integrate the delayed soil sequestration data into the models as soon as possible. Further delay of this activity could seriously compromise the overall project outcome delivery.

ES27. There are other recommendations, which are appropriate to improve the sustainability of the project in future follow up or impact on institutions and on human capital. These include:

Recommendation 7: To the EPIC team for capacity building and dissemination of results

Strengthening the contacts between COs, ensuring that results are disseminated and discussed, including virtually.

ES28. ET noted a very high level interest in country – especially in Malawi and Vietnam – for the training extension activities on CSA. The ET also recommends that project follow up will eventually include developing training material on CSA practice to be used at field level as leaflets in local languages. This would allow to reach a larger number of beneficiaries and therefore to increase social sustainability and impact of the project. Separately, the ET noted that students would benefit from more involvement and discussion of their research with others doing similar work.

Recommendation 8: To the EPIC team for capacity building in-country

a. Include interested stakeholders in country on the activity on CSA manual training.
b. Consider financing students from Zambia and Malawi to meet, sharing research methodologies and findings. Or at the least, foster online collaboration. This recommendation aim to increase project impact on university institutions as it could foster future collaboration on research and teaching activities especially between Zambia and Malawi. This will increase the impact on human capital as students would benefit from international exchange.

Recommendation 9: To the EPIC team for disseminating information ensuring full uptake of results

a. Further elaborate the visibility plans for this year, with a strong focus on dissemination of flagship publications in two ways:
b. Firstly, nationally in- country through the national coordinators and all existing networks on climate change and agriculture, including through FAO country representatives who can disseminate project findings at high level amongst partners and ministries and other influential bodies such as Steering and Technical Committees on Agriculture and Climate change
c. Secondly, internationally through Climate Smart Agriculture Alliance meetings, Climate Smart Agriculture conferences and side events at the COP if possible in the Agriculture and Rural Development days, or similar
d. Considering the large platea of stakeholders involved (policy makers, government officials, universities, research and statistical Institutions, private and public technical assistance, international donors, civil society) products should be tailored considering the specific use that is expected.

1 Introduction

Background and purpose

1. Climate change is increasingly being recognized as one of the biggest challenges of our time. The challenge is particularly daunting in the agriculture sector, given its key role for food security and livelihoods but also its high sensitivity and dependence on climate. In a bid to sustain agricultural production in the face of climate change and recognizing that agricultural development and climate change cannot be tackled in isolation from each other, in January 2012 the Agricultural Development Economics Division of FAO launched a three year project co-funded by the European Commission and FAO titled "Climate Smart Agriculture: Capturing the Synergies between Mitigation, Adaptation and Food Security."

2. The project is based on the notion that food security, agricultural development, climate change adaptation and mitigation need to be addressed together in order to capture potential synergies and manage possible trade-offs across these closely linked areas. This is at the heart of the concept of climate-smart agriculture (CSA) that FAO uses. The concept encompasses sustainable agriculture, expanding it to include the imperative for climate change adaptation, the potential for mitigation and the need to consider the technical, policy, institutional and financing implications of such inclusion. A crucial innovation of the project is that it is not solely based on pure research or on pilot case studies. Instead it combines research and policy analysis with the aim of attracting funds for CSA investment proposals that are evidence based and tailored to country needs.

3. The project works with governments, local institutions and universities in Malawi, Zambia and Vietnam. Its main goal is to support these countries in securing the necessary technical, policy, and financial conditions to be able to: 1) sustainably increase agricultural productivity and incomes, 2) build resilience and the capacity of agricultural and food systems to adapt to climate change, and 3) seek opportunities to reduce and remove GHGs to meet national food security and development goals.

4. To achieve these objectives, the project starts by: a) developing an evidence base drawn from socio-economic, land use and climate data, as well as from institutional, policy and project/programme analysis; b) a policy support component based on policy analysis, institutional mapping and policy dialogue. The evidence provided will serve to underpin the identification of promising practices, to identify adoption barriers to remove and to help managing risk for smallholders. The policy component will seek to increase horizontal coordination across relevant ministers, to increase vertical coordination between the national and international levels, and to build the capacity for a more evidence-based and integrated policy making. Outputs produced will contribute to developing country-owned strategic frameworks for investment in CSA activities, which in turn culminates with the elaboration of CSA investment proposals including identification of potential funding sources for each country.

5. The purpose of this mid-term evaluation (MTE) is to review the progress made towards achieving outcomes in accordance with the project document (PRODOC) and to identify corrective actions if necessary. The objectives of this MTE are:

- To assess the project from its concept and design to current and potential results and impact;

- To include recommendations for filling gaps not yet covered by the project;
- To provide a basis for learning and accountability for managers and stakeholders and to serve as an input on how to effectively up-scale the project and further refine the methodology being used, as appropriate.

6. In view of the stage the project has reached, and its objectives regarding the use of the information generated, the MTE will assess the following:

- The quality, usability and relevance of the primary and secondary data being gathered for identifying genuine and feasible CSA options;
- The adequacy, effectiveness and capacity of analyses and models being employed to produce the desired evidence base;
- Effectiveness of institutional capacity building towards CSA-sensitive policy within country governments;
- The project's strengths and capabilities to link research on CSA to policy-making;
- The scope and opportunity for simplifying data gathering, analysis and requirements, and economic modelling, and managing the project in countries where weak data is provided, were the project to be replicated in other countries or were other countries to be interested in assessing the opportunities to invest in CSA.

7. The evaluation used the following core evaluation criteria:

- Relevance (responsiveness to the needs and priorities of the country);
- Effectiveness (progress towards the achievement of development results and implementation of better processes to achieve those results);
- Efficiency (reduction of transaction costs for the country, the UN and donors in comparison to previous arrangements);
- Sustainability (the probability of benefits to continue over time).

Methodology of the evaluation

8. In close agreement with FAO Office of Evaluation (OED), and with approval of the European Commission funding the project, the independent mid-term evaluation (MTE) has been undertaken at the beginning of third year of the project. The MTE was postponed until this date because there was a delay in the formal inception of the project, meaning that the project teams are only now ready to take on the recommendations of an MTE.

9. The MTE assesses the project from its concept and design, through its evolution and to the current and forecasted results. The project has been critically assessed through the internationally-accepted OED evaluation criteria, i.e. relevance, efficiency, effectiveness, impact, and sustainability. In line with the new FAO project cycle, the evaluation has assessed compliance with the following UN Common Country Programming Principles: Environmental Sustainability, Capacity Development, Gender Equality and Results Based Management.

10. The Evaluation team has followed the Guidelines provided by the FAO OED under the TORs. The evaluation is based on documentary analysis of internal documents and external publications, interaction with the project team through interviews at FAO HQ and a 10 day mission to Zambia and Malawi. Given delays and difficulties in the startup of the project for the country of Vietnam as well as its geographic distance from the other two countries, in the case of Vietnam a selected group was interviewed by telephone.

11. The extensive review of internal documents examined Terms of Reference, PRODOC and internal reporting to funder, all Mission BTORs and workshop reports, Publications and draft papers, Questionnaires and data, Modeling data, M & E, Budgets and timesheets.

12. The evaluation team conducted semi-structured interviews with the project team, consultants, the steering group and with the project's main beneficiaries and selected stakeholders in Malawi, Zambia and Vietnam. These were mostly identified with the help of FAO OED, PT and FAO CO's. During the course of the MTE to triangulate information collected from a variety of independent sources, the ET identified further stakeholders to interview, and where possible these interviews were arranged. These interviews in the capital cities focused on key coordinating ministries and departments responsible for climate change and agriculture. The ET also met with FAO, major donors and NGOs that play a relevant role in agricultural and rural development and climate change. Interviews also included representatives from civil society and consultations with the rural poor. The profile of interviews is described in Table 1. A full list of the people and institutions consulted is presented in Annex 5.

Table 1 Interviewee Profile from Project Countries

Stakeholder	Malawi	Vietnam	Zambia	Notes
National Government Ministries	9	1	5	Ministry of agriculture and environment interviewed
Donors	3	1	5	
NGO/Implementing partners	5	6	3	
Other stakeholders (Farmer's unions etc.)	3		2	
Private sector/farmers	2		2	The ET required more interviews with private stakeholders but there was no response to requests in the timeframe

13. There were some limitations and challenges experienced during this evaluation. The key limitation was the ET's lack of mission to Vietnam. The ET considers that this limitation was mostly mitigated through remote interviews. However, some requests for interview were not met. A minor, but significant further limitation was that on mission in Africa some key stakeholders were unavailable during the Mission period. The most important were followed up with phone calls, or provided substitutes for interview, some of which were less knowledgeable about the project interactions and therefore may have resulted in a less favorable reflection of the project's successes. Triangulation with various sources assisted in

these instances as far as possible. Limitations of an administrative nature related to a contract delay for the CSA expert member of the evaluation team, who was therefore unable to visit the Rome HQ for interviews, affected the quality of interactions at the start of the Evaluation.

Implementation arrangements

14. The Project's institutional structure consists of a Project Team based in the Agricultural Development Economics Division (ESA) at FAO headquarters and in the FAO- Offices of the three partner countries. The Project Team is under the overall supervision of the ESA Economics and Policy Innovations for Climate Smart Agriculture (EPIC) Team Leader (P5) and it is composed of a P5 Project Leader, P4 Project Coordinator, two P3 Economists and a P2 Project Officer. Each partner country also has a Country Technical Coordinator.[1]

15. The EPIC programme has a goal of increasing resilience to climate change and promoting climate smart agriculture in developing and in-transition countries. The goal is to support development of agricultural investment proposals, and to identify and harmonize climate smart agricultural policies, analyze impacts, effects, costs and benefits to adoption of climate smart agricultural practices.

16. Under the umbrella of the EPIC programme the project "Climate Smart Agriculture: Capturing the Synergies between Mitigation, Adaptation and Food Security." aims at strengthening the capacity of three partner countries – Malawi, Vietnam and Zambia, and seeks to bridge the gap between field research, policy-making and financial investments. EPIC also has broader activities including contributing to multilateral negotiations on climate change and working with regional policy instruments such as the Comprehensive Africa Agriculture Development Programme (CAADP).

17. The Project Team is[2] responsible for the overall coordination of the Project with FAO regional, sub-regional and national offices, as well as across relevant units within FAO headquarters and external partners. Close working arrangements with national staff, consultants, research institutions, universities and other organizations are sought.

18. In addition, and to better reflect the three major components of the project: research, policy and institutional strengthening, aside from the core Project Technical Team described above, specialised consultants were externally recruited for research work, Geographic Information System (GIS) and Investment/Financing. A Policy Specialist has also been externally recruited to help facilitate dialogue across countries and between FAO and ministries, and to support representatives of partner countries Ministries of Agriculture to participate in international climate change negotiations (UNFCCC Conferences of the Parties COP).

19. In each of the partner countries, the Ministry of Agriculture (MoA) is the main policy partner for the Project, with close linkages to other relevant ministries (i.e. of Environment, Development Planning and Finance). In Malawi this is the Ministry of Agriculture and Food Security (MoAFS), in Zambia the Ministry of Agriculture and Livestock (MAL), and in

[1] In Vietnam, further support is provided by one national coordinator and a UN Volunteer.

[2] In this document, where we refer to Project Team or PT, we mean the Project Team for the Climate Smart Agriculture Project under evaluation, and not the wider team of the entire EPIC programme

Vietnam the Ministry of Agriculture and Rural Development (MARD). In each case, the partner country has designated a department and staff person to be the focal point for the Project and have constituted core team to approve project progress, to provide advice, and to validate activities and outputs. In addition, in each country, a research partner institution has been identified and involved in the project. These include: Bunda College in Malawi, University of Zambia in Zambia, and Thai Nguyen University of Agriculture and Forestry in Vietnam.

20. In addition, the Project Team has established an Interdepartmental Technical Task Force (ITTF) at FAO headquarters involving relevant FAO Units, holding informal and *ad hoc* meetings to review work plans, thematic reports and documents, in addition to seeking advice and comments when needed.

21. The total budget of the project is EUR 5.3 million. The financial contribution from the European Commission amounts to EUR 3.3 million whereas FAO is contributing EUR 2 million of which:

- EUR 0.9 million is provided through staff time, offices, equipment and the use of FAO representations in-country,
- EUR 1.1 million is provided by SIDA[3] under FMM trust fund.

22. Partner countries have engaged with the project through the provision of political support and commitment to the Project objectives, participation of national policy and research staff in Project activities and the provision of office space for the Project in country.

2 Context of the project/programme

23. "Climate-Smart Agriculture" addresses the challenges of building synergies among climate change mitigation, adaptation and food security that are closely related with agriculture and attempts to minimize their potential negative trade-offs. It seeks to enhance the capacity of the agricultural sector to sustainably support food security, incorporating the need for adaptation and the potential for mitigation into development strategies.

24. Recognizing that agricultural development and climate change cannot be tackled in isolation from each other, in 2012 FAO and the European Union launched a three year project on "Climate-Smart Agriculture: capturing the synergies between mitigation, adaptation and food security" (GCP/INT/139/EC). The project works with governments, local institutions and universities in Malawi, Vietnam and Zambia.

25. Expected long-term impacts of the CSA Project are to contribute to the achievement of Millennium Development Goals 1 Eradicate Extreme Poverty and Hunger and 7 Ensure Environmental Sustainability, as well as Article 2 of the UNFCCC.

26. The expected outcome of the Project is that the capacity to undertake and finance climate smart agriculture is strengthened in the three partner countries. The following outputs are expected to be delivered through the Project in all three partner countries:

[3] Swedish International Development Agency.

- An evidence base for identifying, developing and implementing practices, policies and investments for CSA is built;
- Country-owned strategic frameworks for CSA activities are formulated;
- CSA investment proposals are formulated and possible financing – including from climate finance – is identified;
- Capacity for evidence-based planning, implementing and financing CSA is built.

27. The partner country contexts are unique, and the choice of survey zones was made to reflect differences within the country context as well as between the countries.

Zambia

28. Zambia has a land area of 752,000 km^2, mostly grassland in the central plateau, becoming semi-arid in the east, and swampy in the northeast. Almost half of the country is covered by bushland and forest. Zambia's population in 2011 was only 13.4 million, with one of the lowest densities in the world (17.3 persons /km^2). The majority live in rural areas. Zambia has achieved high economic growth over the past decade based on mining, manufacturing and services expansion, but poverty remains still high as 60% of population is below the international poverty line in 2010 (WB, 2014). The country is on track to achieve most of its Millennium Development Goals (MDGs) but its overall level of social and economic development is still very low (ranked 150 out of 169 countries on the global HDI in 2010). Agriculture accounted for 19.5% of GDP in 2011, employs over 50% of the workforce, and generates about 10% of export earnings. Zambia has a great agricultural potential but agricultural growth has been slow. The data partly reflect the structure of the sector where a majority of small-scale farmers are located in hard-to-reach areas. Smallholders own on average 1.5 ha o^f land, use low input technologies, rely on family labour, and mostly produce for household consumption.

29. Several factors contribute to the low productivity of agriculture in Zambia: there is little incentive to increase production as markets are distant; relatively high availability of land, discouraging intensification, limited skills and access to capital, and drought. Maize production dominates agriculture, being grown by 85% of farmers and covering 50% of the planned area. Maize production is supported by two government programmes: the Farmer Input Support program (FISP) and the Food Reserve Agency (FRA), which buys maize from farmers at a guaranteed price. Other smallholders' crops include cotton, groundnuts, rice, tobacco, beans, sugarcane and vegetables. Around 20% of smallholders own cattle, mainly in the south. Zambia is divided into three agro-ecological regions, namely region I, II and III with different rainfall and soil quality patterns. The challenge of rapidly boosting productivity is compounded by the current and expected impacts of climate change. Changes in precipitation and temperature, especially in marginal areas, are expected to reduce productivity and make production more erratic (Cline, 2008; Lobell et al. 2008; Boko, et al. 2007). Consequently, there is a need to simultaneously improve agricultural productivity and reduce yield variability over time under adverse climatic conditions. The project survey on CSA practices has been conducted in eight districts: Mumbwa, Chibombo, Kalomo, Choma, Katete, Chipata, Chimsali and Mpika.

30. The agricultural technologies and practices that constitute a CSA approach are, in most cases, not new, and largely coincide with those of sustainable agriculture, conservation agriculture and sustainable intensification. However, under a CSA approach, these are

evaluated for their capacity to generate increases in productivity, resilience to current and future climate impacts, and climate change mitigation for specific locations, given the expected impacts of climate change. CSA-related issues addressed in Zambia were: 1) conservation agriculture with agro-forestry and soil & water conservation; 2) diversification of production (dairy, legumes); 3) input use efficiency; and 4) the role of agriculture as a driver of deforestation.

Malawi

31. Malawi aims to reduce poverty through sustained economic growth and infrastructure development as outlined in the MGDS 2006–2011. Poverty still remains high as 50% of population is below the international poverty line in 2010 (WB, 2014). Agriculture is the most important sector in Malawi's economy, employing about 80% of the workforce, the majority of who are women. Compared with services and industry – at 46% and 19%, respectively – agriculture accounts for nearly 35% of gross domestic product (GDP) and for more than 80% of export earnings. Most of the agriculture GDP (about 70%) is generated from the smallholder subsector. Overall, agriculture supports close to 85% of the population and contributes significantly to national and household food security. According to the World Bank (2010), close to 2 million of the total 2.7 million hectares of cultivated land in the country is tended by smallholder farmers in small and fragmented landholdings, averaging less than 1 hectare per household, under customary land tenure. Development resources, strategies and policies in Malawi since independence have emphasized agricultural development, and the country continues to benefit from substantial, multiyear donor programmes. However, productivity and overall production remain low in the smallholder sector compared with larger commercial estates.

32. Agriculture is a significant driver of growth through regional exports and import substitution. However, agricultural exports have remained undiversified, with little value added, dominated by tobacco, tea, cotton, coffee and sugar. Maize, the dominant food staple, is grown on almost 85% of the smallholder land area together with other food crops, such as cassava and sweet potatoes, to meet subsistence requirements. Women farmers produce 80% of food for household consumption but are less involved in cash crop production and are still largely marginalized in commercial agricultural initiatives. The growth of Malawi's agricultural economy is constrained by land size limitations; low productivity; ecological constraints and limited diversification; chronic poverty and lack of access to capital/credit for investment; low technical know-how on aspects of production through to post-harvest management; high input prices; limited accessibility to quality inputs; poor market access; high marketing costs; and demographic and social factors. As a result, approximately 80 %of smallholders are locked in a semi-subsistence-based maize production system and remain net buyers of food. Although maize yields almost doubled between 1980 and 2010, overall yields have generally remained low in comparison with regional levels. There has been low uptake of improved farming inputs; smallholder agriculture remains unprofitable.

33. Smallholder farmers have limited access to extension services and productivity-enhancing technologies, among other constraints. The Farm Input Subsidy Programme (FISP) – implemented in the 2010/11 season by the Government with support from development partners and providing 1.6 million smallholder farmers with seed and fertilizer – was also reported to have contributed to the higher production. Despite the significant levels of support provided to the agriculture sector, parts of some districts remain chronically food insecure owing to adverse climatic conditions, such as flooding, dry spells and droughts. Predicted impacts of climate change in Malawi particularly affect smallholder, rainfall dependent

farmers, who form the large majority of the Malawian agricultural sector (Denning, *et al.* 2009). A synthesis of climate data by the World Bank (World Bank, 2012) indicated that in the period 1960 to 2006, mean annual temperature in Malawi increased by 0.9°C. This increase in temperature has been concentrated in the rainy summer season (December – February), and is expected to increase further. Long-term rainfall trends are difficult to characterize due to the highly varied inter-annual rainfall pattern in Malawi. Similarly, future predictions are inconsistent.

34. Assessments of climate change impacts on agriculture are highly variable across agro-ecological zones (Boko *et al.* 2007; Seo, *et al*. 2009). The field survey and the Cost Benefit Analysis (CBA) for this project were conducted in the districts of Mzimba, Kasungu and Balaka, representing the lakeshore and medium altitude ecological zones of the country. These districts were selected for the concentration of CSA practices adopted, diversity of agro-ecological zones and presence of predominant farming systems (mainly maize mixed farming systems cereal-root crop mixed systems and agro-silvo-pastoral systems). CSA-related issues identified as priority, and addressed in Malawi were: 1) conservation agriculture with agro-forestry and soil & water conservation; 2) diversification of production (dairy, legumes); 3) Input use efficiency; 4) the role of agriculture as a driver of deforestation; 4) smallholder irrigation management; 5) livestock/Agro-forestry; and 6) safety nets and risk management. These areas form some key components of a CSA-related approach to adaptation, mitigation and food security in smallholder agriculture, and were prioritized in the inception workshops as key areas at the national level.

Vietnam

35. Vietnam is considered a development success story. Political and economic reforms (Đổi Mới) launched in 1986 have transformed Vietnam from one of the poorest countries in the world (<US$100 income per capita per year) to a lower middle income country (US$ 1,374 per capita/year) within three decades. Living standards have tripled, and the poverty headcount ratio has fallen from 80% to 14% in 2011. Vietnam has also achieved dramatic progress in improving non-income dimensions of poverty, and has met, or is likely to meet, most of the MDG goals. In recent years, Vietnam's economy has been subject to periodic bouts of macroeconomic instability. The urban population is growing rapidly but the overall population remains significantly rural (73%) and is concentrated in the two main rice-growing areas – the Red River delta in the north and the Mekong lower basin in the south.

36. Success in the agriculture sector is partly due to policy reforms, including the allocation of land-use rights to individuals and market-based incentives such as higher prices for crops. In 2000-2005, the country moved well beyond the earlier experience of chronic food shortages to becoming one of the world's largest rice exporters. Crop production accounts for the largest share of agricultural output. Significant improvements have been made in rural infrastructure over the last decade: better access to services; increased agricultural productivity in many regions; and greater opportunities to diversify rural income sources. Agricultural growth has slowed somewhat in recent years as structural issues are constraining agricultural growth, i.e. land fragmentation, undeveloped financial markets, lack of appropriate technologies, poor post-harvesting arrangements, and the need for more processing in order to remain competitive.

37. Vietnam is one of the world's countries most vulnerable to the effects of climate change. Natural disasters already result in annual economic losses equivalent to 1.5% of gross domestic product (GDP). Climate change is expected to increase existing risks to natural

resources, agriculture, food security, infrastructure and health. In Vietnam the project is focusing on the three provinces of Yen Bai, Son La, and Dien Bien. These are all located in the Northern Mountainous Region (NMR), one of the poorest of Vietnam. Research indicates that this area is experiencing food shortages and food insecurity due to climate shocks while an increasing number of plots are affected by problems of dry soil, land slide and stony soil. These problems are exacerbated when one considers that the NMR has a significant area of upland cultivation of food crops (maize, rice, cassava, etc) on very steep slopes subject to soil erosion and landslides. Soil erosion is seen, indeed, as one of the major problems for sustainable agriculture development in sloping areas, especially in Son La province, which is the largest maize production area (130,000ha in 2010) of the country. Sustainable land management practices on sloping lands, including mini-terracing, legume-crop rotation, minimum soil disturbance and other measures of soil and land erosion control, are the CSA-related issues addressed in Vietnam. Diversification into coffee, tea and rubber, and agro forestry are also key options taken into consideration. Some of these agricultural practices are already part of the provincial policies or local initiatives but are not widely adopted most likely due to a number of barriers which the project aims to understand and to address.

38. These snapshots of country situations, with particular reference to the agricultural context, demonstrate the need for a climate smart approach to agriculture in the affected areas. Both Malawi and Zambia are characterized by low income, low input agriculture, whereas Vietnam's smallholders may have access to increased income for farm investment. A range of agro-ecological zones was identified across the projects.

39. Zambia has historically exhibited a high level of aid dependency although the share of ODA as a percentage of gross national income has decreased substantially in the last decade. The largest bilateral donors for Zambia are the US, EU, the UK's Department for International Development (DFID), Norway and the Netherlands. Key donor programmes are run by the IMF, EU, USAID, WFP, WB and FAO. FAO-Zambia supports various initiatives including the Southern Africa Development Community (SADC) and the promotion of conservation agriculture (CASU). Malawi's main donors are the European Commission (EC), DFID, World Bank, African Development Bank, Norway, Germany, USAID, and China. These account for more than 90% of Malawi's development assistance. Other donors include the United Nations Development Programme (UNDP), UNICEF, the World Health Organization (WHO), and the United Nations World Food Programme (WFP), Global Fund, Japan International Cooperation Agency (JICA), the Icelandic International Development Agency (ICEIDA), and Ireland. Over the past decade, FAO has been supporting the Government of Malawi's efforts to address agricultural and food security threats and emergencies. FAO-Malawi is currently delivering emergency and rehabilitation assistance and providing technical support for development through its Regular Programme (RP) Unit. The FAO Plan of Action (PoA) (2012–2016) is a strategic tool to promote more integrated planning and coordination. Major donors to Vietnam are the World Bank, Asian Development Bank (ADB), France and Japan. Government and World Health Organization (WHO), and the United Nations World Food Programme (WFP), Global Fund, are the donor-supported activities have focused on ensuring agricultural productivity growth and diversification; improved farmer access to markets; market information; and natural resources management. The International Development Association (IDA) contributes the most to agricultural and rural development in Vietnam, followed by IFAD and Japan.

40. Meeting the financing requirements for CSA implementation will be a significant challenge. Given overlapping and interrelated investments required to meet the multiple

objectives of CSA, the financing systems that support these objectives must be closely linked to maximize the efficiency of climate-smart investments and to manage the fragmentation of sectoral solutions. However, funds for climate adaptation, mitigation, agricultural development, and the closely related goals of food security and sustainable land management generally come from different sources. Without a coordination framework for these funds, there can be a tendency towards inefficiency and insufficient access to financing for climate-smart agriculture (Shames et al., 2012). In order to improve coordination of finance in support of CSA, the project could contribute to improving monitoring systems to track the multiple benefits of CSA.

3 Analysis of Project Concept and Design

41. The theory of change on which the program is built provides a clear logic on how and why projected activities should contribute to achieving desired outputs and long term objectives. This strategy identifies a research component and a policy component in order to respond to the ultimate project objective of developing a policy environment and an agricultural investment strategy to attain increased food security and provide resilience.

42. The strategy is based on the notion of first establishing an evidence base, which would involve assembling existing data and collecting targeted new data. By analyzing this data and developing policy simulation models, data are used to identify promising practices and adoption constraints, as well as policies to promote these practices and overcome constraints. Mapping institutional relationships and financial instruments that are already in place complements the evidence base. The integration of the analytical component with the policy support component should build the capacity for more evidence-based and integrated policy-making ending in more effective agricultural policies, more effective climate change adaptation and mitigation, and increased food security. The investment plan should respond to the fact that implementation frameworks for addressing climate change issues are not supported by corresponding budgetary provisions.

43. In-country interviews and research produced within the project have confirmed the existence of several challenges and concerns with respect to agricultural and climate change that are specifically addressed by the project design. Main issues raised regard inadequate extension services for farmers; lack of knowledge and weak research capacity to generate evidence to guide policies; limited technical capacity both in terms of numbers and competence at district level; implementation frameworks for addressing climate change issues not supported by corresponding budgetary provisions. The ET finds that the issue of institutional effectiveness at local level has not been fully considered in the project design, although the Vietnam case, which has a regional focus, will be able to provide insights with this regard. In the three countries, institutional mapping combined with institutional data analysis is providing guidance on how to fulfill this objective.

44. Although the rationale for CSA is very strong in each of the three countries, the ET found confusing the choice of this specific country grouping, given that two of the countries border each other, and are similar in agriculture, social and climate conditions, and opportunities for shared learning; whereas Vietnam is an outlier with different socio-economic context. The present choice is not oriented to ensure similarity in context, to maximize the representativeness of different agro-ecological conditions, or to enhance the efficiency of project management. Interviews with PT clarified that the choice of the country

was determined by a combination of EC interest, consultation with countries in order to check for willingness and capacity to participate and, EPIC team suggestion made on the basis of relevant criteria such as 1) importance of smallholder agriculture sector for food security 2) interest of key policy-makers institutions to participate, 3) availability of data, 4) links to other ongoing FAO work, including work on the transformation of smallholder agriculture and the design of social safety-nets.

45. On the basis of these considerations the ET has rated the quality and realism of project design as 'good' (score average 4.8).

4 Analysis of the implementation process

4.1 Project/programme Management

46. The project management is set up as follows. The Economics and Policy Innovations for Climate-Smart Agriculture (EPIC) team are leading the implementation of the project. For the CSA project a **Project Management Unit (PMU)** has been created, which is comprised of a project manager, a project coordinator who also oversees monitoring and evaluation, and a project officer responsible for managing budget issues and other administrative requirements.

47. In order to oversee country evidence gathering and policy support activities, one technical coordinator was hired per country. The in-country technical coordinators work in collaboration with Officers and National Consultants of the Project Technical Unit (PTU) to ensure that the evidence base generated by the CSA project is coordinated with the existing policy processes. They report to the Project Leader and to the FAO Country Representative and have the specific mandate to promote, liaise and maintain close working relationships with the relevant national institutions and regional/district offices to ensure participation in the implementation of the project activities. For specific country activities, two team members have been identified as country focal points and are responsible from HQ while other team members are responsible for specific research areas. This set up of the team and this reporting structure is ample and well designed for the needs of the project. Further details are in the Outputs section.

48. An inception phase was planned for the first six months of the project (from 1 January to 30 June 2012). However, in two of the three countries inception activities were prolonged for six more months as the Memoranda of Understanding in Vietnam and Zambia were signed later than foreseen. Delays were due to broader political issues and tensions stemming from a change in government in Zambia, and to the rotation of FAO Representatives in the three countries. An additional difficulty that led to delay in project approval was that the project document was drafted in general conceptual terms without providing sufficient country-specific context.

49. During the inception phase, extensive consultations were held with partner country stakeholders, including policy makers, universities, farmers' unions and research organizations. The aim of these consultations was: a) to finalize, elaborate and streamline the Project design and its implementation plan; b) to tailor project activities to the specific country context and needs and, c) to establish a policy dialogue to be strengthened throughout the project's time span. During the inception phase the project teams at FAO headquarters

and in country were set up; project coordination arrangements were undertaken in agreement with country governments; and work plans and budget with institutional partners in the project countries were reviewed. An inception workshop was held in each country, with a full report on more specific areas and activities of focus agreed during this meeting. All the partner countries appointed a national counterpart as focal point for the project that has participated in the Project Steering Committees (PSC). The national focal points are senior officers in the Ministries of Agriculture who are expected contribute to oversight and guidance of project implementation whilst maintaining an active interaction with relevant policy makers and other key stakeholders. This design is well considered allowing the project to be embedded within each country's institutional structure and given the need for CSA capacity building in the countries involved. A more details discussion of the execution of this is provided in the outputs section.

50. The M & E has been conducted by combining the logical framework with the project work plan following a results-based approach as illustrated by the theory of change. The updated work plan has been made available to all team members in a shared workspace. Monthly and bi-weekly reports from the PC were produced for the project team. A mid-term retreat was organized to undertake a mid-term assessment of the project (deliverables, timing, linking across components, outputs and assessment of impacts) and to update the work-plan for project activities for the remaining project life. Given the challenges inherent in multi-country management of the project, this level of reporting and record keeping is both necessary and good management. However, the actual uptake and use of these reports by the country offices was unclear. The mid-term retreat was an essential part of this work given the delays in project inception and the need to consider what priorities should be for the rest of the project.

51. The project has experienced severe delays because of late project approval in project countries. While in **Malawi**, the procedure was more rapid, and approval was obtained in May 2012, in Vietnam and Zambia, the process took longer than expected: in **Zambia** in October 2012 and in **Vietnam** in December 2012. The inception workshops could take place only after project approval in the partner countries, which meant they were held in July 2012 for Malawi, in December 2012 for Vietnam, and in January 2013 for Zambia. Although the project team did some work at the country level in 2012, (e.g. investigating available datasets), main activities started only in 2013 in Zambia and Vietnam. Considering that most of the activities are expected to be completed in the next few months there is a severe risk that there will not be enough time for adequate dissemination of project results and mainstreaming into government decision processes. The ET recommends that the project be extended for a period of six months in order to strengthen the sharing of information and learning in country and therefore to positively affect the possibility of a successful outcome for the project as a whole. A more continuous presence of PT members in countries in the last months of the project is also recommended in order to strengthen partnership linkages around the investment proposals and to work on the follow up.

52. Delays were also apparent in the university capacity building work. In Malawi the university delayed the 2012/2013 academic year for political reasons. This situation had repercussions for the first cohort of four Master students supported by the project. More widely, the selection process of students was very slow and time consuming in the three countries. The structure of the academic year in the universities is such that most of the students will finish their work only by the very end of the project or in some cases after the end of the project. This has a strong negative impact on: 1) the dissemination of students'

research findings and their utilization in project activities; and 2) the students' policy brief commitment as agreed in the LOAs with the Universities. The ET suggests that: 1) dissemination of proposal content and preliminary research findings, if available, is carried out before project ending; 2) that some policy brief writing training is provided by FAO before project completion; and 3) that considering that activities will be concluded after the project end date adequate financial administrative arrangements are agreed with the universities involved.

53. The main changes in the activities with respect to the initial project plan have been: 1) the inclusion of new topics linked to improving resilience to climate change after discussion in project countries in response to need perceived from the country offices and preliminary research (i.e. the risk and income diversification issue that has been incorporated in the policy simulation models); 2) the choice to have a regional focus in Vietnam (the Northern Mountainous Region) because the diversity of agro-ecological zones and agricultural production systems would have made it very difficult to cover the whole country with the resources available to the project,–the choice was made in consultation with the government of Vietnam; 3) the re-thinking of the data collection strategy in Vietnam where available data were found to be unsuitable to meet project needs—in this case a more comprehensive data survey has been carried out by the project, filling existing gaps; and 4) the addition of a new activity of developing and testing a training manual on CSA in response to demand from COs to include an activity that that would directly benefit the country; 5) the value chain analysis for coffee and tea in Vietnam, that has been added to compensate for lack of data and to address one important CSA related issue for the NMR raised by various stakeholders in the area .The ET agrees that these changes have improved the effectiveness of project outputs with regard to project objectives although the MTE has not been able to evaluate the value chain analysis because results were not available.

54. On the management side, the main changes were the substitution of the CO in Malawi in July 2013, the budget revision, and the transition to the new FAO Global Resource Management System (GRMS). None of these factors have had major negative impact on the project activities.

55. International staff contracted on the project and focal point FAO CSA project coordinators are high calibre and technically very good. Some concerns arise because of the limited interaction between consultants in charge of different activities with possible lack of overall vision, and also between consultants and COs. At the end of this, an investment framework will be created bringing all of this work together in a coherent whole. If the in-depth understanding and expertise is not shared fully earlier in the project, this may lead to shallower or perhaps slightly skewed suggestions for the most appropriate CSA investments.

56. Given that these countries are part of a three-country project, country-to-country sharing on policy shaping, information gathering and analysis, and on investment frameworks generated could be both useful in terms of capacity building and substantive knowledge sharing, as well as process-based discussions about how to achieve policy influence. Country-to-country sharing could be enhanced by strengthening the contacts between COs and ensuring that results are disseminated and discussed, even virtually. Students from Zambia and Malawi could also benefit from the chance to meet, sharing research methodologies and findings. These recommendations aim to increase project impact on university institutions by fostering future collaboration on research and teaching activities especially between Zambia and Malawi and on human capital as students would benefit by international exchange.

57. The CSA project coordinators in country are highly technically skilled. Their activity will be fundamental in leading on external dissemination of findings in-country in the final stage of the project. CSA project team has been disseminating publications throughout the project and this activity will step up as a greater volume of publications become available. Greater budget autonomy and some administrative support could speed up their activities at this stage, reducing delays due to communications between HQ and COs. FAO country representatives can support this as well; with a good briefing by the project coordinators, they can disseminate project findings at a high level amongst partners and ministries and other influential bodies such as the Steering and Technical Committees on agriculture and climate change. In order to achieve a high visibility of activities and therefore increase project impact and sustainability, the ET recommends PT to elaborate the visibility plan. This should have a strong focus on dissemination of flagship publications as they become available both in-country through the national coordinators and internationally through Climate Smart Agriculture Alliance meetings, Climate Smart Agriculture conferences and side events at the COP if possible in the Agriculture and Rural Development days, or similar.

58. Some partners had late delivery, which has slowed progress in related (downstream) work (e.g. Aberdeen). The PT has elaborated an alternative strategy in case new data on mitigation will not be available in time, based on the utilization of existing, less precise, information available at FAO HQ. The PT is also working on livestock area internally (reallocating some funds away from Aberdeen to FAO for organizing a workshop on improving GHG emission estimation from livestock activities and practices) and using an internally developed methodology dedicated specifically to livestock emissions. The ET considers that this exit strategy described above is a reasonable alternative. However they acknowledge that losing the opportunity to generate specific, nationally-tailored data could impact how useful this data is for the respective countries.

4.2 Financial resources management

59. The project costs at of 30/3/2014 are USD 3,488,500, comprising 80% of the total budget. Ninety percent of the remaining balance has already been allocated (travelling, consultancy etc.), whilst USD 80,000 is currently unallocated and is available for new activities.

60. One third of the project budget was allocated for contracts with partner institutions. About 50% of the budget has been allocated to professional salaries and consultancy. This allocation is in line with planned activities.

61. A revised budget was approved by the EC following FAO's request. Budget revision was needed only in order to re-align categorization of items between FAO and EC reporting systems. This did not impact on the project.

4.3 Efficiency and effectiveness of institutional arrangements including Government's participation

62. During the inception phase the main institutional arrangements were set up. More specifically, during this time a backstopping unit (Project Team) at FAO headquarters has been formed; National Technical Coordinators (NTCs), and an expert in policy and technical issues related to climate change and agricultural development, have been identified and recruited in each country and all required logistics have been arranged; an Interdepartmental

Technical Task Force at FAO headquarters has been established; country partners and focal points have been identified; National Project Management Structures (i.e. the Steering Committees and Technical Committees) have been established.

63. The project team undertook appropriate scoping for a project of this size and importance, organizing several meetings with national Government officials and others in order to define scope and areas of the project, to decide which aspects of CSA were most relevant to take into account and the research questions to address. These activities ensured alignment between the foreseen research activities and the conditions in the field.

64. The project team additionally sourced a series of appropriate providers for additional services relating to project activities. These included agreements:

- With Bioversity International to facilitate FAO's efforts to assist Project Partner Countries in identifying CSA practices, policies, institutional arrangements, strategies and investment proposals for implementation;
- With the **University of Malawi, Bunda College of Agriculture** to provide coordinating activities related to the selection and supervision of, and administering funds for Malawian MSc and PhD students to undertake academic research in areas of Climate Smart Agriculture;
- With the **University of Zambia** to support nine Zambian Nationals undertaking Masters courses and one PhD;
- With the Thai Nguyen University of Agriculture and Forestry (TUAF) to provide fund to support nine graduate students in Vietnam to conduct research for their master theses in areas relating to the tradeoffs and synergies between food security, adaptation to climate change, and mitigation of GHG emissions;
- With the **Northern Mountainous Agriculture and Forestry Science Institute (NOMAFSI)** in Vietnam to define all background and baseline activities and collect further material needed to the implementation of the project in the Northern Mountainous Region;
- With the **University of Aberdeen** to provide carbon mitigation data for the countries;
- With the **University of Viterbo** (*Università degli Studi della Tuscia*), Italy, to provide academic and research training to one Vietnamese PhD candidate;
- With the **Centre for Social Research** at the University of Malawi to undertake research activities to analyse the impact of social cash transfer on farmers' adoption of adaptation practices and on their consequent resilience to climate change;
- With the **International Center for Research in Agroforestry (ICRAF)** to establish a protocol for collaboration building on the synergies on respective project activities in the Northern Mountainous Region of Vietnam;
- With the **International Centre for Tropical Agriculture (CIAT)**, within the CGIAR research programme on Climate Change and Food Security (CCAFS) to provide Participatory Climate-Smart Agriculture Scenario building;
- With the Institute of Policy and Strategy for Agriculture and Rural Development (IPSARD) to conduct research on agricultural and climate change policies in Vietnam;
- With IFPRI (**International Food Policy Research Institute**) and FANRPAN (**Food, Agriculture and Natural Resources Policy Analysis Network**)

(Memorandums of Understanding signed during this evaluation period) – with IFPRI to cover questionnaires in Zambia and Malawi, and with FANRPAN to cover dissemination and political awareness raising in Zambia and possibly Malawi.

- Further agreements with the World Bank for access to the Integrated Household Survey (IHS) in Malawi and P2P project for data on climate shocks relating to their projects.

65. In addition to these agreements for activities to be undertaken in the countries, local consultants in partner countries have been contracted for particular tasks.

66. The ET agrees with the choice of partners made by the PT as they are all well experienced and with good knowledge of countries specific situation. Evaluation of contribution of each partner to the project is provided in the output section.

67. The institutional partnerships established in countries have been very relevant in terms of increasing the country capacity on CC and CSA. A good balance of international expertise where necessary, alongside national expertise, was found, keeping the quality of outputs high. As a result, Universities are putting more attention on CC in their curricula; the Zambia Statistical Office will be regularly collecting new data on agriculture practices. Research Stations in the three countries had benefitted from training of their researchers through the cost/benefit survey.

5 Analysis of results and contribution to stated objectives[4]

5.1 Achievements at Outputs level

68. **Output 1:** An evidence base for developing and implementing policies and investments for climate smart agriculture is built in the three (3) partner countries

69. Activity 1.1: Meta-database of existing household level datasets with information relevant for adaptation and mitigation documented and available for analysis: Household datasets have been identified in each of the three partner countries. These include socio-economic data as well as information on food security and current adaptation-relevant CSA practices (e.g. agroforestry, use of cover crops, conservation agriculture, legume crop rotation etc.). In Malawi, the primary data set being used is the third wave of the Integrated Household Survey that was collected in 2010-11. This has been supplemented by additional data sets including climatic data from the US National Oceanic and Atmospheric Administration (NOAA), election data and institutional data collected part of the project. In Zambia, the primary data comes from the 2004 and 2008 Rural Income and Livelihoods survey. Similar to Malawi, climate variables are also obtained from NOAA as are data from the European Centre for Medium Range Weather Forecast. Soil data from the Harmonized World Soil Database were also obtained. For Vietnam, data from the Vietnam Access to Resources Household Surveys was obtained and attempts were made to obtain data from the agricultural census. While the data collected in Malawi and Zambia was relevant for analyzing CSA and of sufficient quality to conduct statistical analysis (Activity 1.5), the data from Vietnam was less useful. The activity was fruitful in identifying the existence of available databases that

[4] The term 'results' includes outputs and outcomes

highlighted the strengths and weaknesses of existing data and allowed for analysis. The secondary data is clearly limited but the EPIC team has used the best data that is available. In the case of Zambia and Malawi, the data is usable for an analysis of CSA and it has been used effectively to ask relevant questions. That does not mean that the analysis is ideal, but it is best possible given the data. In Vietnam, data is not available so no analysis is done. In terms of the primary data collection, the focus is on collecting limited data to analyse the costs and benefits of technology adoption. This has been slightly expanded for Vietnam due to the limitations in the available secondary data. For its purpose, the primary data should prove to be useful. Given the limitations of the project, as alluded to in the report the data is being used to identify genuine and feasible CSA options.

70. Along with collecting data from the countries to use in the statistical analysis, the EPIC team has reviewed existing evidence and literature on CSA. Two papers focusing generally on CSA were completed and presented at conferences[5]. The first paper highlights recent experiences with country-level implementation of CSA to identify key lessons. The second paper focuses on a related issue looking generally at how climate change affects the way that agricultural systems and the people that manage and govern them need to change in the coming decades to achieve food security. These two papers provide a strong overview of the relevant literature for the EPIC project and general guidance on policy options that should be relevant for designing specific policies for Malawi, Zambia and Vietnam.

71. Two additional completed papers review evidence on CSA practices with the first focusing on Malawi and Zambia and the second on Vietnam. The Malawi-Zambia paper notes that Malawi and Zambia have promoted CSA techniques, particularly through agroforestry and conservation agriculture. Whilst this might indicate that the EPIC project itself is not novel in its approach, the focus of the EPIC project on institutional and policy change for CSA is different, and had been highlighted previously as one of the bottlenecks for effective uptake of CSA techniques and approaches. The work on CSA through EPIC has focused on a more holistic understanding of CSA than has previously been used. The paper seeks to synthesize the existing evidence on the adoption of these techniques as well as their impact on yields and socioeconomic outcomes. The findings suggest that agroforestry is a promising option for smallholders leading to greater yields and profits among adopters. The evidence on conservation agriculture is weaker but appears to be positive. The adoption rates are found to be higher than in other countries but not as high as might be expected given the level of promotion and the potential benefits. The Vietnam paper seeks to provide similar insights into CSA adoption focusing on the northern mountainous region in Vietnam where the project is focusing. The evidence currently available for Vietnam is much more limited making it more difficult to draw clear conclusions. One of the reasons for limited adoption of CSA practices – suggested and by the policy papers and confirmed by interviews in the three countries - is that benefits tend to be positive few years later than when adoption starts. In other cases there might be other constraints such as a lack of skills, limited labor or restricted availability of inputs as seeds. The EPIC research aims to understand these constraints to adoption and to suggest policies and investment strategies to remove these constraints and to understand where adoption might be most beneficial. This work is also critical to ensure that the EPIC project build on existing evidence and not repeat what has already been done. In order to fully take into account the issue of the availability of technologies for CSA practices

[5] ("Second Global Conference on Agriculture Food Security and Climate Change" in Hanoi, Vietnam in September 2012 and "Food Security Futures: Research Priorities for the 21st Century" in Dublin, Ireland in April 2013.)

at local level, i.e., improved seeds, in making the investment proposal, the ET recommend the PT to consider a broader consultation with private sector stakeholders.

72. The combination of the collection of a meta-database that can be used for an analysis plus general and country-specific literature reviews provide a strong foundation for developing an evidence base for CSA-targeted policies and investments. EPIC builds on this existing information by expanding the analysis of CSA adoption and collecting more detailed information on CSA practices that allow for a great understanding of where CSA is likely to be beneficial. This should help in targeting and designing future projects.

73. *Activity 1.2: New household and institutional datasets needed for CSA evidence base:* The project has developed targeted household-level questionnaires in case study countries in collaboration with other projects or institutions to collect more in-depth information on CSA. The primary objective of the household surveys is to collect detailed information on CSA technologies to understand the conditions under which CSA technologies would be adopted. In particular, the data collected through the household surveys is to be used to analyse the benefits and costs of adopting CSA technologies. In Vietnam where there is limited secondary data to analyse CSA adoption (as noted under Activity 1.1), the household surveys have been augmented to be used to analyse adoption behaviour in a manner comparable to Malawi and Zambia.

74. The household surveys have been undertaken in Zambia and Malawi and are in the process of being implemented in Vietnam. There has been a delay in Vietnam as the team sought to identify adequate partners for administering the survey and had to modify the questionnaire to incorporate further elements.

75. Along with household surveys, a survey of local government and non-government institutions relevant for adoption of CSA systems has been undertaken in Zambia and Malawi. This is still ongoing in Vietnam. The institutional survey aims to get a sense of the activities being undertaken to promote CSA adoption, with a view to providing useful information for the policy context. The data has also been incorporated in the statistical analysis (Activity 1.6) undertaken in Malawi. It does not appear to have been used in the Zambia analysis. Review of the existing literature indicates a number of institutional issues that are critical and affect successful adoption and up-scaling of CSA options, such as credit access, extension provision, existence of agricultural input and output markets, the presence of public safety nets and micro-insurance programs, secure property rights, and the availability of donor/NGO programs and projects. Information has been obtained to match the household survey data to the lowest administrative level possible. The integration of the two sets of information provides a new insight on private and public factors than can enhance or impede the adoption of CSA practices. This provides an overview of what efforts, if any, are underway for promoting CSA adoption. Understanding current institutional structures and programs are necessary to ensure suggested CSA policies fit into existing government efforts.

76. *Activity 1.3: Meta-database of soil sequestration potential by farming practices linked to household datasets*: The compilation of technical data on soil sequestration potential by agro-ecological region and by agricultural practices by the University of Aberdeen has been severely delayed. This has implications for both the CBA conducted as part of Activity 1.2 as well as the statistical analysis conducted in Activity 1.6. As such, the delay has broader implications for completing output 1.

77. *Activity 1.4: Conceptual framework for identifying CSA strategies developed*: The conceptual framework sought to meet three related objectives: (1) To understand farm-level adoption of CSA technologies in the presence of climatic variability and the role of policy instruments to affect farmer decision-making; (2) To determine the relationship between farm-level adoption of CSA technologies and the public goods nature of those technologies; and (3) To identify the general equilibrium effects of the adoption of CSA technologies. To this end, three corresponding models have been developed to understand farm-level decision-making when faced with risk, adoption and the public goods nature of CSA, and a computable general equilibrium model. These each provide insights into the conceptual issues underlying the adoption of CSA and form the basis for the policy simulations (Activity 1.6) and to a lesser degree the analysis of the data (Activity 1.5).

78. *Farm-level model:* The ultimate goal of the farm-level model is to identify practices and policies that will help farmers adapt to climate change. To do this requires carefully thinking through farm-level decisions to adopt technologies when yields are risky and technologies can improve yields or reduce the effects of risk. Building on previous models, the EPIC team has constructed a model that helps think through this farm-level decision-making.[6]

79. A key feature of this model is the distinction between inputs and techniques. Inputs are viewed as being purchased during the growing season with a return coming at harvest. Given the temporal dimension of investment, input use can be affected by credit constraints. On the other hand, techniques require household labour, which has a cost in the use of labour but not a monetary cost and are thus not affected by credit constraints. Another aspect of this distinction is that inputs have monetary costs and a return in the season in which they are used, while with techniques, there is a possibility of a delayed return. This is to reflect the fact that some CSA technologies (e.g. conservation agriculture) have a potential short-run cost of lost yields.

80. Into this model a series of policy variables are explicitly and implicitly incorporated. Subsidies to inputs and techniques are included and show how costs to each can be reduced through government intervention. Output prices and credit constraints are also incorporated allowing considerations of instrument that can affect decision-making through those channels. Based on this, a series of conclusions about optimal behaviour of farmers can be inferred.

81. This base model is then expanded to incorporate the possibility of insurance coverage and crop diversification by households. Both of these are important means of dealing with risk and thus key consideration when considering responses to climate change. The inclusion of these possibilities in the model expands the number of policy instruments that can be considered. The model is then used to assess the impact on decisions when key variables are changed including agricultural output subsidies, subsidized credit, increased weather variability and extension services.

82. Overall, the model meets the objective of providing critical insights into farmer decision-making with respect to adoption of CSA technologies and the role policy can play in influencing those decisions. There are aspects of the model that could be expanded to include more detail. For example, the manner in which an initial decline in yields from certain technologies is modelled has been simplified and a more dynamic model could have been

[6] The model can be found in Graff Zavin (2013) and this write-up is based on that model and discussions with the author.

used. But it does not appear that a more complete and complicated model would add many additional insights and it would make the model more difficult to understand. Further, the model will be used as the basis for policy simulations that may be eventually be used by project teams and excessive complexity would make this harder. For the farm-level model, the EPIC team appears to have found a reasonable balance in the trade-off between completeness and complexity.

83. *Model incorporating public goods nature of CSA:* The second model developed under the program focuses on the adoption of sustainable land management (SLM) practices, which includes CSA.[7] SLM practices are techniques that minimize land degradation and generate ecosystem services and can thus have benefits to yields of adopting farmers as well as local or global externalities. Although the SLM practices are expected to increase resilience of agricultural systems, their adoption has been limited. This is troublesome not only because of the potential farm-level benefits of adoption, but also because they generate externalities. The objective of the paper then is to determine how the projected increases in the incidence of extreme climatic events, and associated impact on yields, might influence the adoption of SLM techniques by low-income smallholder farmers and how policies might be used to promote adoption. Given that policies should be influenced by the externalities associated with adoption, the model incorporates this possibility considering collective action failure. This allows an analysis of policy responses that can incorporate both farm-level benefits and externalities under a reasonable set of assumptions.

84. The model developed to assess farm-level decision-making is less comprehensive than the previous model created by Graf Zivin discussed above. This is partly a practical consideration since a more complicated model would be less tractable and unable to adequately incorporate the public goods nature of SLM adoption. Further, the purpose of the model is to incorporate the public goods nature of adoption and this is critical. The focus is a reasonable trade-off between a comprehensive model and one that is tractable.

85. The farm-level model in this case has two inputs—one that is a composite input and the other that is an SLM input and each with an associated cost. As with the Graf Zivin model, the costs of SLM incorporate the potential short-term loss to yields over time but noting costs including future costs. The budget constraint includes not only revenue from production and costs of inputs but the possibility of payment for environmental services that is related to the amount of carbon sequestered. This allows for the possibility of payment for an externality. Finally, risk is incorporated into the model through the possibility of random losses that are linked to weather events (which is modelled using a Poisson process). The model then shows the role of risk in the use of inputs clearly identifying its dampening effect (production effect). The model also highlights the benefit of reducing the probability of a catastrophic outcome (loss reduction effect) and the positive role of carbon sequestration payments on the adoption of SLM (carbon sequestration effect).

86. The model is then extended to add positive spillover effects from the use of SLM inputs. A social planner would then incorporate the public good nature of SLM in assessing the benefits of adoption. The model then shows the socially optimal decision when the behaviour of farmer has additional benefits to other farmers.

[7] The model can be found in McCarthy et al. (ND); this write-up is based on that model and discussions with the first author.

87. Overall, the public goods model provides useful insights in to how decision-making by farmers to adopt SLM is influenced by risk and the suboptimal investment in SLM when the public goods nature of SLM is incorporated.

88. *Computable general equilibrium model:* The third model developed under the program is a computable general equilibrium (CGE) model that focuses on land use changes.[8] Given the project objective, the expectation for this model was that it would look at the impact of widespread CSA adoption on the broader agricultural landscape assessing how it might affect land-use changes including deforestation. The terms of reference for the CGE construction focus on how to address market and policy failures and broadly the policy coherence of Zambia's REDD+ strategy. This seems a broader focus than the adoption of CSA techniques that are the focus of the overall research project.

89. The model is developed solely for Zambia and is based largely on an existing CGE model with underlying Social Accounting Matrix data. The model includes standard assumptions about agent behaviour. A critical part of the model is that it includes regional features regarding production activities, factors of production and household types. The regional component is important in that it provides a more realistic view of the economy and an ability to determine how effects vary within regions of the country.

90. The model was adjusted to fit the requirements of the analysis for this project. A key adjustment is to separate a charcoal-specific activity and other uses of wood. This requires adjusting the data and underlying behavioural assumptions in the model. As is generally the case in a CGE model, an important part of designing a model is thinking through the relationships in the economy. The motivation for separating out charcoal from other wood is the fact that charcoal is a proximate driver of deforestation in Zambia. Thus, conceptualizing how charcoal and other wood is considered in the model is important.

91. In defining the model itself, what is unclear is how CSA adoption would fit into the model. Presumably, adoption has implications for land use, but this is not clearly articulated in the paper and in fact the written report is not particularly focused on this key issue. Modelling or at least discussing CSA adoption more explicitly in the paper would help to provide a stronger understanding of how CSA is linked to general land-use effects. Even if EPIC project leaders and those developing the model do not believe CSA activities will have general equilibrium effects, or that they are relatively minor, this is an important insight and should be highlighted.

92. Activity 1.5: Statistical analyses of policy factors that increase agricultural production and adaptive capacity, and capture synergies with mitigation objectives. The statistical analysis is primarily based on secondary data collected as part of Activity 1 although in the case of Malawi the institutional data collected via Activity 2 is also incorporated. The conceptual foundation of the analysis comes from a note by McCarthy titled "Empirical Strategy for Incorporating Climate Risk." The note explicitly seeks to link the first two conceptual models developed as part of Activity 1.4 and the empirical analysis by noting the implications for the models for the inclusion of variables in the analysis of CSA adoption. Since the models highlight the role of risk, among other factors, this requires the incorporation of climate variables including rainfall variability, rainfall in the growing period,

[8] This discussion is based on Pycroft (2014), the terms of reference provided to the author and discussions with the author.

average rainfall and higher mean temperature, into the models. The note also highlights a number of other variables to be included in the empirical analysis. While many of these are standard, the note provides a basis for their inclusion. As such, the empirical note provides guidance for the subsequent country-level analysis.

93. Statistical analysis has been completed in the case of Malawi and Zambia but has yet to be undertaken in Vietnam due to data issues noted under Activity 1.1. The analysis in Zambia has been completed and resulted in a paper published as an FAO working paper and an additional paper that is under review at the journal *Agricultural Systems*. The first paper focuses on the adoption and disadoption of conservation farming in Zambia focusing on two key aspects: minimum zero tillage and planting basins. The analysis finds that extension services and rainfall variability are key determinants of adoption highlighting the role of policy and risk in adoption decisions.

94. The analysis in the second paper examines the impact of adoption of CSA practices on yields and their resilience. While there have been previous efforts to conduct such an analysis, this is the first effort to do so using nationally representative panel data and with a rich set of controls including climate-related variables. The results suggest that there is no significant impact of minimum soil disturbance, a positive impact of legume intercropping and a negative impact of crop rotation on maize yields. The impact of legume intercropping is robust to climatic shocks and the negative impact on rotation is offset by a significant positive impact under highly variable rainfall conditions. The analysis also suggests that climatic variables influence modern input use and that the timely access to fertilizer has important effects on yields.

95. A similar analysis using the data from Malawi is nearing completion with a final working paper forthcoming. The Malawi paper focuses on CSA adoption and the impact of adoption on maize yields. The analysis also seeks to determine the interdependence of adoption decisions to determine if agricultural practices are compliments or substitutes. As with Zambia, the analysis shows that climatic variability plays a role in adoption of sustainable land use-practices but that it reduces the use of modern inputs. Delayed onset of rainfall also increases adoption. Another key insight is that rural institutions and social capital play critical roles in adoption. Again this mirrors the conclusion in Zambia of the importance of extension since both reflect the relevance of knowledge and information flow. With respect to the interdependence of decision making, the results point to adoption of one practice being influenced by the adoption of other practices. Finally, the results suggest that adoption of CSA technologies have a positive impact on maize yields.

96. For both Malawi and Zambia, additional analysis is envisioned that will result in one more paper for each country. The focus of this additional analysis is on livelihood diversification. The idea of examining livelihood diversification is to examine how climate change may alter general risk management behaviour. This path of research was not envisioned as a key part of the original EPIC proposal but has evolved as the team has considered how to analyse the impact of climate change and alternative strategies to CSA. As such, it provides broader insights into how CSA adoption fits into a farm household's overall livelihood strategy. Overall, the statistical analysis of the Malawi and Zambia data expand our understanding of CSA adoption and the factors that influence adoption and the impact of this adoption on yields. This has important implications for policy.

97. *Activity 1.6: Development of a policy simulation model*. The policy simulations are used to assess, under a reasonable set of assumptions, which policies and/or institutional

mechanisms can be used to reduce and overcome barriers to CSA adoption. Three sets of simulations are envisioned based on the conceptual models noted under Activity 1.4. In each case, this requires having baseline data to parameterize the model and to use as base values as the basis of the simulation. The simulations are not all completed and the focus is what has been done, what is intended and where in the process things stand. The assessment is based on both discussions with the key researchers and the provided papers.

98. *Farm-level simulations.* There has yet to be a simulation completed for this model as the data is not yet ready. The plan is to run policy simulations once all the relevant data has been compiled by the EPIC team. A list of all the necessary information that will form the basis for the model has been prepared and this is guiding the data preparation. The data list is closely linked to the developed model and should be able to meet the objectives of conducting the analysis. Along with the list, questions have been provided reflecting anticipated policies so that the selected simulations reflect policy options. The process of preparing the data is near completion and the simulations should be completed in the coming months.

99. The model is set up in such a manner that the policy simulations to be done follow logically from the model. The completed paper shows how the model provides insights into the impact of agricultural output subsidies, targeted production subsidies, subsidized credit, changes in weather volatility, and extension services. These are likely to form the basis for simulations. Further, it is anticipated that policies that encourage conservation agricultural practices, agricultural diversification, the provision of insurance, improved climate forecasts, and the use of safety net policies could be evaluated.

100. After completion of the simulations for the research project, the team envisions the creation of a rudimentary 'dashboard' that will allow in-country policy makers to experiment with various policy choices and to see their anticipated outcomes. The simulations are expected to produce helpful insights into the effectiveness of different policies in inducing farm-level adoption of CSA practices.

101. *Simulations incorporating public goods nature of CSA.* The simulations incorporating the public goods nature of the project build directly on the conceptual model using data from Zambia and Malawi. Data on Vietnam is not incorporated at this time. The parameters of the model are taken from a number of reasonable secondary sources and appear to represent the best data available. Given the available data, simulations evaluating the impact of CSA adoption for Malawi are based on maize producers while for Zambia it is for any producers with land under conservation agriculture.

102. The simulation seek to identify the optimal use of a composite agricultural input and a CSA input (specifically a SLM input) under cooperative and non-cooperative scenarios—that is, where a social optimum is achieved and where this optimum does not occur due to a failure to internalize the externalities associated with CSA adoption. Using the parameters of the model, baseline optimal values for the composite input and the CSA are determined. Simulations are then run to determine the impact of changes in the exogenous probability of disaster, changes in discount rate, the enactment of a credit subsidy and a policy of payments for carbon sequestration.

103. The simulations provide a number of useful insights. For example, as the probability of disaster increases the adoption of the CSA technology moderately increases but only up to a point. At a certain point if disasters are large enough, there will be a general decline in farming as households shift to other activities, such as off-farm work. The adoption depends

on the effectiveness of the CSA input in reducing disaster loss with a less effective input leading to a greater chance that a household will shift from agriculture. Adoption is also limited by the lack of cooperation among farmers and the inability to capture the global goods nature of the technology. More cooperation then induces greater adoption. Another key factor in CSA adoption relates to agricultural potential. Lower agricultural potential dampens the value of adoption suggesting that in marginal lands efforts to boost productivity must complement efforts to promote CSA technologies. This explains why relative adoption in Malawi would be less than in Zambia. The effect of carbon payments also differ in across the countries as the benefits to carbon sequestration in Malawi are viewed as higher than in Zambia. This means a carbon payment provides greater adoption in Malawi as incentives are higher.

104. Overall, the simulations highlight that the effectiveness of policies will depend on agroecological characteristics of an area, the expected losses and the carbon sequestration potential. Further, the simulations show that in more disaster prone areas, under provision in terms of what is socially optimal will be greater suggesting a greater need for coordination and cooperation in these areas.

105. *Computable general equilibrium model.* As noted in the conceptual section, the basis for the CGE model was an existing model and underlying SAM for Zambia. The model was adjusted to incorporate a charcoal-specific activity and other uses of wood. A baseline simulation was run to evaluate the impact of this change relative to a model that does not incorporate this linkage. A 10-year time horizon is considered (2006-2016) with results reported for 2016. The charcoal-land link changes the model by allowing land supply to change through deforestation. The baseline simulation shows that charcoal is a significant driver of deforestation with it linked to a 7% increase in land (96 thousand hectares) and a corresponding increase in deforestation.

106. With this base model a series of simulation are run to determine if this baseline would alter with exogenous changes. These include a charcoal tax, change in efficiency of charcoal use and increases in livestock productivity. As would be expected a charcoal tax and increase in efficiency of charcoal use leads to a reduction in the increase in land supply and deforestation with some clear differences across region in Zambia. An increase in livestock productivity has a limited impact on deforestation suggest a minimal link between livestock production and land use.

107. As would be expected given the manner in which the CGE model is constructed, there is no exploration of the general equilibrium effects of adoption of CSA technologies. As such, the simulations do not provide insights into how adoption may or may not alter overall agricultural practices. Further, the CGE simulations are not linked to the other two simulations in any way.

108. **Output 2:** Country-owned strategic frameworks for climate-smart agricultural activities are formulated.

109. Activity 2.1: Evaluation of existing programmes, policies and institutional frameworks affecting the development, financing and implementation of CSA conducted in the three partner countries. One study for each country has been produced in order to provide a better understanding of how agriculture and climate change policy priorities are set, who shapes them and how this is achieved. The studies mapped out key stakeholders who shape agricultural and climate change priorities and with whom the project would interact in

exploring policy, strategy and investment options for CSA. The underlying assumption for this assessment is that implementation of CSA approaches would only be achieved and sustained through a supportive and coherent decision making process. The specific objectives of the studies included the following: 1) to examine policy formulation and decision making processes related to agriculture and climate change; 2) to identify the key stakeholders involved in these processes; 3) to assess the extent to which national policy is reflected in national policy implementation instruments; and 4) to examine sub-national linkages relating to the translation of national policy implementation documents and how policy issues at a lower administrative level are reflected in national policy, what processes, mechanisms and means are used for these transfers and who are involved.

110. Activity 2.2: Review of consistencies and contradictions between major agricultural and climate change policy documents including Poverty Reduction Strategy Papers (PRSPs), CAADP plans, NAPAs and NAMAs. A review has been undertaken of existing national policies, including key policy instruments such as PRSPs, NAPAs, NAMAs, national climate change and food security strategies, where available, assessing potential synergies or contradictions across these documents.

111. The assessment conducted in parallel with Activity 2.1 reveals that in the three countries both agricultural and climate sectors are quite important in country's policy portfolio. However, policy processes were found to be disconnected. They are essentially two distinct policy processes, with somewhat incoherent attempts to cross reference, which often do not transcend the paperwork. The reviews conclude that these policy domains should be related and better connected because of mutually reinforcing impacts. A second result from these reviews is that one of the major challenges is a mismatch between pronouncements in major policy frameworks and implementation on the ground. The main argument is that climate change priorities have often not been incorporated into the national budgetary framework. In the agricultural sector, the challenge is that the investment portfolio is often biased in favour of the achievement of food security, particularly the production of staple crops A second issue is the lack of implementation mechanisms to transfer the political decision process from the national to the local level.

112. Overall the three studies completed under Activity 2.1 and Activity 2.2, give a clear picture of the need to align the agricultural and climate change policies in the three countries in order to ensure effective implementation of the policies and to increase resilience of agriculture in the face of climate change. The studies across the three countries are quite variable in terms of quality.

113. Activity 2.3: Identification and costing of priority CSA options, based on outputs from Result 1.1 and input from in-country stakeholders. Newly collected household data is to be used to assess the conditions under which the benefits of adoption of particular technologies exceed the costs and are relatively better options than alternative non-CSA technologies. This will help provide insights into which technologies might be promoted in a certain context or among a certain types of farmer. The cost-benefit analysis (CBA) of adoption using the collected data has not been conducted at this time in any of the countries. But four steps are envisioned.

114. The first is to calculate gross margins for conventional and CSA technologies to compare returns to each activity. To do this, the team has defined some of what are considered CSA practices and is currently defining conventional practices. This will be used to link calculated gross margins to different types of households to get a sense of which CSA

technologies are profitable for which households. This is possible since the administered questionnaires include costs and revenues.

115. The second step is to link the private and social benefits of adoption. As noted in the second conceptual model (see Activity 1.4), CSA technologies have externalities that provide off-farm benefits when adopted. The technical work undertaken by the by the University of Aberdeen on soil sequestration potential of farming practices (Activity 1.3) will determine the social value of sequestering carbon via CSA practices. The end result of this step should be an identification of the private and social benefits of CSA.

116. The third step is to conduct an economic analysis of the farm-level net benefits of CSA technologies. Following standard practice in CBA, this step will calculate the farm-level net present value and internal rate of return of the CSA technologies. Based on this analysis, it should be possible to rank technologies by their returns across regions. This approach is similar to analysis done elsewhere in the context of climate change mitigation in that the analysis seeks to find which investments have the highest net return.

117. Finally, the fourth step will be a benchmarking analysis. This step will determine the performance of different types of households with and without CSA in a given agroecological zone. This should help identify farmers most suitable for CSA adoption and where promotion of CSA technologies is most likely to be adopted and have the greatest social benefits.

118. While there is some concern that the CBA activities are behind schedule, the plan to analyse the data appears to be a useful exercise and should prove to be valuable in both understanding adoption behaviour as well as identifying appropriate policies to promote adoption.

119. *Activity 2.4: Facilitated policy dialogue to prepare CSA strategic framework document.* The project has explored the possibility of policy harmonization dialogues on the draft policies for agriculture and climate change. The aim of these dialogues is to strengthen alignment and consistency of policies in order to make them more mutually reinforcing, reduce inconsistencies, manage trade-offs and strengthen their implementation, including through closer cooperation between ministries. The dialogue could also position Ministries of Agriculture in a way that is commensurate with their important economic, social and environmental roles, within a new climate change coordination mechanism proposed by the national climate change policies in both countries. The dialogues will underline the need for Ministries of Agriculture to mainstream climate change into their policies, strategies, planning and programmes.

120. In Zambia, the Project obtained support for the dialogue from the Minister of Agriculture and Livestock and the Minister of Lands, Natural Resources and Environmental Protection. In the case of Malawi, support/approval for the dialogue was obtained from the Permanent Secretaries of the Ministry of Agriculture and Food Security and the Ministry of Environment and Climate Change Management. In Malawi, the National Climate Change Policy is more advanced than the National Agricultural Policy, which makes harmonization more challenging. Nevertheless, a policy harmonization dialogue between the Ministry of Agriculture and the Ministry of Environment and Climate Change has been agreed upon. Vietnam does not have draft agricultural and climate change policy documents under preparation. Moreover government concentrates more on policy implementation, particularly through plans and programmes. This will be clarified through the institutional/policy processes mapping activity currently underway in Vietnam.

121. A policy dialogue aimed at harmonizing the policies of the separate ministries was therefore held in in Lusaka from 12th-14th August 2013. Participants included the key policy, planning and legal specialists from the two Ministries and Cabinet Office with technical support from the CSA Technical team and an independent facilitator agreed on by both Ministries. At the end of the workshop, a draft communiqué was prepared on points of agreement regarding harmonization of the two policies. The ET has verified that the dialogue is continuing and that draft policies have been amended as a result of this policy dialogue activity.

122. A policy dialogue workshop was organized in Malawi on August 20th 2013 between MoAFS and MoECCM and other stakeholders to discuss how linkages between climate change and agriculture might be captured in a harmonized way in agricultural and climate change policies. The workshop was attended by over 24 participants from the two ministries, civil society organizations (CSOs) and academia. During the policy dialogue participants considered agriculture in the draft National Climate Change Policy (NCCP) and climate change in the Agriculture Sector Wide approach (ASWAp) and used these to consider elements and design features for a National Agricultural Policy (NAP), currently under preparation by MoAFS. After the presentations and discussions, participants agreed to a communiqué.

123. **Output 3:** Climate smart agriculture investment proposals are formulated and possible financing, including from climate finance is identified

124. *Activity 3.1: Country-specific business model for linking climate finance to smallholder agriculture developed.* This activity is ongoing. Although the draft is not yet due and the ET was not able to comment on this output, the ET has made some recommendation to be addressed to the consultant in order to increase the impact and the sustainability of the output from this activity. The recommendation is to mainstream the investment proposal into a broader initiative on climate change and food security ongoing in countries in order to reduce the fragmentation of actions that often characterize donors contribution.

125. **Output 4:** Capacity for evidence-based planning, implementing and financing climate smart agriculture is built in the three (3) partner countries.

126. *Activity 4.1: Construction of web-based knowledge-sharing platform to facilitate iterative learning across stakeholders.* During the period under review, a new website was created at the following URL: www.fao.org/climatechange/epic . The website represents the main channel to convey the project's outcomes and activities externally. In the last year from April 2013 – April 2014 there have been 10,278 page views, with more than 2,100 users accessing the website. The PT has contributed to the CSA Alliance knowledge platform, and is currently working on a knowledge sharing platform into the website to facilitate iterative learning across stakeholders. An electronic consultation on scenario building was undertaken also. Creating an internal workspace based on Microsoft Sharepoint strengthened internal communication among project teams in different countries.

127. A number of communication activities have been integrated into this project to ensure effective communication. These include: website development and sharing with other related websites, publications dissemination, shared electronic workspace for project team members, knowledge sharing platform, a regular newsletter and electronic forum. Some of these have been developed more fully than others at this stage.

128. *Activity 4.2: Support to national PhD and Master's students on Project-related work.* MSc students and PhD Students have been selected to be supported to conduct research on CSA related topics. Currently, in Malawi four students at Masters' level and one PhD student have been selected in 2012 at Bunda LUANAR for four Master's students in 2013. The first cohort is at a point of dissertation writing while the second cohort is starting the field work for data collection for analysis. In Zambia four students are still completing the course requirements at the University of Zambia before starting the research work. In Vietnam nine Master's students and one PhD student have been selected. The Master's students have completed their fieldwork and are on track to graduate in September 2014. All the students are conducting research in areas related to the tradeoffs and synergies between food security, adaptation to climate change, and mitigation of GHG emissions.

129. *Activity 4.3: Training of agricultural and climate change policy-makers on issues of climate smart agriculture.* In order to strengthen capacity within government for evidence-based decision-making on policies that enable the uptake/up-scaling of climate-smart agricultural practices the project has supported inter-ministerial dialogue, workshops and using decision-support tools such as participatory scenario building. FAO has been cooperating with the CGIAR Research Programme on Climate Change, Agriculture and Food Security (CCAFS) in the development of national participatory scenario building workshops.

130. A training workshop designed to enhance capacity and the knowledge base of leading institutions in the three countries to move towards CSA and to appraise the mitigation impact of agriculture and foods security strategies and policies using EX-ACT was organized in February 2014. The objectives of the training were:

- to explain CSA as a concept and the way it links with the green economy and sustainable development;
- to advice on the best ways to climate proof agriculture and food security policies and strategies;
- to explain what is carbon balance appraisal, and how it links to carbon funding/ carbon markets; and
- to use the EX-ACT.

131. From consultations and previous assessments, there has emerged the need for an improvement in the evidence with respect to climate change and the quality of the dissemination of knowledge and appropriate design of strategies awareness to specific target groups. To help alleviate these challenges the CSA project has developed material in the form of a training manual—"Training of Trainers" (ToT) among the frontline agricultural extension staff. At the moment the manual is in the process of being validated in Malawi. Next the CSA training for these trainers will take place in Malawi as well as in Zambia and Vietnam after the adaptation of the manual to local situations.

132. *Activity 4.4: Support for agricultural policy-makers in attending national and international climate change policy processes.* In order to strengthen the capacity of Ministries of Agriculture in their understanding of international climate change-agriculture issues and their intergovernmental negotiating and networking skills within intergovernmental processes, the project has supported the attendance of UNFCCC meetings by designated staff from the ministries. The project Senior Policy advisor prepared a briefing note prior to each session on the items of relevance to agriculture. In this context, the Project supported participants from all three countries at the following meetings:

- 14 - 25 May 2012, UNFCCC Climate Change Talks, SBSTA 36, in Bonn, Germany;
- 26 November - 7 December 2012, UNFCCC Climate Change Meetings, SBSTA 37/COP18, in Doha, Qatar;
- 3-14 June 2013, Bonn Climate Change Conference, SBSTA 38, in Bonn, Germany.

133. Project-supported staff attending UNFCCC meetings were requested to report on their attendance, experience and what they had learned. The project team held meetings with participants from the three project countries to exchange information on the negotiating process, positions of different blocs of countries and country-level experiences.

134. In scoring the activities in this section, the ET judged the quality of delivered output as good (Score 5); indeed some of these outputs are excellent, represent an international standard and will contribute significantly to the evidence base on CSA nationally and internationally. However, a lower score is rated for 'the extent to which outputs have been produced' and 'timeliness' due to delays.

5.2 Achievements at Outcome level

Outcomes:

135. The project has the overall outcome "***Capacity to promote CSA and access to CSA financing increased***". The building blocks of this outcome comprise four indicators/targets of the outcomes. These have been modified since the inception of the project in the revised progress report sent to the EC by the project team. We assess each in turn briefly before commenting on the overall outcome.

136. *Indicator 1. CSA viable solutions identified or viable CSA projects implemented*. The evidence base on CSA viable solutions is considered high quality given the analysis of household datasets, the review of evidence of CSA practices, the plans for CBA and the conceptual framework for identifying CSA strategies developed through the modelling of farm-level decision making (see Activities reporting under Output 1). It is likely that viable solutions will be identified by the end of the project, although some regionally specific data is being awaited related to the meta-database of soil sequestration potential which has implications for the CBA and some of the statistical analysis. The ET has not seen evidence that any CSA projects will be actually implemented through this project in situ, and considers it unlikely to achieve this objective by the end of the project in December 2014.

137. *Indicator 2. Climate finance proposal submitted for funding and/or appropriate adoption mechanisms and tools developed.* The climate finance proposal submission remains to be done (see Activity 3). This was always envisaged to be a relatively late stage activity in the project, but is overdue due to a number of factors discussed previously. Building blocks of activities have been done – investment proposals prioritizing promising CSA options are being development based on research and costs and benefits. But some work remains to be undertaken to realize this indicator.

138. *Indicator 3. In-country capacity to implement a CSA strategy built.* In country capacity individually and institutionally has been strengthened on CSA through the project,

particularly through strengthening networks between ministries, and individually within ministries. The ministries of the countries are in different stages of capacity building and, crucially, political readiness to take on a CSA strategy. The CSA evidence base is being strengthened and is becoming available for ministries and training has been undertaken at the national level, with engagement at the international level. Gauging how far capacity has been built, and how effectively this will be taken forward by those involved beyond the end of any specific training is very subjective. But as far as possible the project has shown specific indicators which demonstrate this evidence in terms of capacity building. The institutional data analysis produced very relevant analysis on the governance system relating to agricultural and climate change policies, particularly for Zambia and Malawi. Addressing the lack of coordination and weaknesses of delivery systems and institutions appears critical for the successful further uptake and upscaling of CSA.

139. *Indicator 4. Increase in policy documents linking climate change and agriculture with respect to the 'before-project' situation.* An important measure for this project is to assess how it has implemented policy change with uptake of CSA and integration of agriculture and climate change. Evidence based in policy documentation is one clear way to measure this. But there are caveats to this, which the ET considers important. Firstly, it is unclear what policy documents are taken as a baseline on which to measure this increase. Secondly, different policy documents will range in importance and the level of implementation possibility/probability/certainty, so this means that a quantitative indicator may be a little spurious. The ET were informed for example that a finalization of the overarching agriculture policy in Malawi is extremely unlikely for a number of political reasons outstanding at present – if this is the case, then it becomes just as important for the project team to focus on existing, lower level or more discrete topic area policy documents that are already being implemented, or have more certainty attached to their funding status, focusing efforts on capacity building of the ministerial team in this situation to create a readiness for implementing CSA practices within existing policy.

140. However, with these caveats in mind, the indicator has some validity as a useful proxy or partial part of a story of change and the evidence the ET received is as follows. Malawi is one of the pilot countries for the National Adaptation Plan, under the Ministry of Environment and Climate Change, with discussions by UNITAR held in September 2013 and a process of consultation in progress in 2014 through the Global Water Partnership. This project is contributing through direct input from the CO and the project's policy analysis In Malawi, existing policy documents prior to the project discuss climate change and agriculture together (the ASWAp, MGDS I and II) and the Sixth National Development Plan, as well as the National Climate Change Response Strategy on Agriculture (2010). Thus these issues are quite integrated already in policy terms. In the ASWAp, CSA fits under the pillar of Food Security. Climate change is still a relatively new area, with few projects. Recent months have seen a Climate Change Investment Plan developed, which includes capacity needs, communications strategy, climate change learning strategy and institutional frameworks. The budget for this will be USD100m or more, and it is led by the new Ministry of Environment and Climate Change Management. Under this, district development plans will also mainstream climate change considerations. The lack of well-articulated agricultural policy creates a challenge and some existing environmental policy contradicts agricultural policy – so there are plans to integrate existing environmental policy into further drafts of the agricultural policy as it is taken forward. The most recent draft of the agricultural policy included CC as a cross cutting issue for agricultural policy. An officer reported from the Ministry of Environment and Climate Change Management that, having had the ability to

communicate with the Ministry of Agriculture as part of this project, they plan to write a position paper on agriculture for the UNFCCC COP. Whilst attribution is difficult within any project working towards policy change and capacity building, we can be reasonably confident that there was a significant influence of the project towards this outcome. In addition the National Climate Change Investment Plan) NCCIP in Malawi launched in April 2014 contains specific reference and a programme on Climate change community resilience through agriculture production, amongst other areas.

141. In Zambia the ET was unable to access copies of draft climate change and agriculture policy documents as these are confidential until published by the ministries. However, officials reported on content verbally during interviews. In Zambia the previous version of the Zambia National Agricultural Policy 2004-2015 did not include explicit reference to climate change, but now it does include some references. The contribution of the CSA project to foster policy harmonization was confirmed by Ministry of Agriculture and Livelihood officials in a meeting in Tanzania. Ministry officials informed the ET that the new (and first ever) draft Climate Change Policy in Zambia now includes significant reference to agriculture after a series of 'very good dialogues' according to an official within the climate change secretariat. The Climate Change Ministry is also integrating climate change into the Sixth National Development Plan, in addition to key sectoral policies such as agriculture. Meetings in Zambia between the agriculture and finance ministries ongoing during the evaluation in March 2014 suggested that, in addition to policy, hard budgeted investment proposals were being developed. One of the project focal points in the Ministry of Agriculture is involved in this process, so it can be expected that climate change will feature in this planning. The main factors influencing this achievement were that both the policy documents were in a draft stage, and so therefore it is possible to influence the integration of different components concurrently. In addition, key focal points within the ministry took forward this brief as it is central to their concerns about food security.

142. A consensus at the strategic level between agricultural development and strategies of climate change adaptation and mitigation is recognized in Vietnam. Due to the lack of financial resources and expertise at the local level, strategies that are designed at the central level are not transformed in effective policies. The ET welcome the regional focus that the project has had in Vietnam as a real contribution to capacity building at the local level as a strategic lever to increased integration between climate and agriculture issues in policies.

143. The use made by the project of FAO's existing knowledge products and networks within FAO is considered to be extensive by the ET. This project is closely aligned with other work by EPIC and centrally placed within the body of work by FAO on CSA. For example, the training manual developed as one of the outputs has drawn heavily on FAO CSA training manual, adapting it for the Malawi country context. This project will strongly contribute to the body of evidence published by FAO on CSA, both specifically on policy change and policy processes in the three countries, also in terms of evidence on CSA practices and their adoption and limitations to adoption, and finally in terms of climate finance and access to climate finance for agriculture. This evidence is already being disseminated at an international level through FAO's.

5.3 Gender equality

144. Despite gender being lacking from the design of the project, there is evidence that these considerations are increasingly coming out, albeit in a relatively oblique manner, in the project outputs. The ET analysed documentary evidence of gender sensitivity and priority within the outputs of the project. Inception reports from the countries from months 6-12 respectively do not bring in the topic of women or highlight this as an area for specific focus. Later, in the first scenarios building exercise, the Malawi report mentions women in agriculture, women in urban areas and women as a key source of economic growth. There is some scant reference to women in the Vietnam scenarios, and none from Zambia. In the academic paper analysing the adoption of CSA practices, gender was analysed explicitly as a criteria for adoption/non adoption. In the most recent review by Kackzan et al (2013), the ESA working paper number 13-07 of current practice of agroforestry and conservation agriculture in Malawi and Zambia, there is mention of gender differences in conservation agriculture practices. In particular they find that some conservation agriculture practices increase weeding requirements, which increases time inputs of women. The household survey is collecting gender-disaggregated data, though it is unclear to what extent gender will be prioritised as a focus for analysis. At least one of the Masters theses will analyse gendered impacts on farming of CSA, but this report is not ready yet. Recommendations would be that a specific analysis of gender is undertaken from the household survey involved, and that the gender implications of CSA are prioritised in results, with the results disseminated and taken up by ministries in their thinking and planning for investment in CSA initiatives. Specific gender issues did not come out in the field visits although few women lead farmers were interviewed. The investment plan for the project would also be advised to consider gender implications as well.

5.4 Capacity development

145. This project design has been specifically focused on capacity development as a major component and objective at all three levels. Firstly, at individual level, capacity building has targeted three groups:

146. MSc and PhD students in the three focus countries. Students have been selected through a competitive process, and those with the best and most relevant research proposals have been awarded funding for their studies and their research. There have also been some limited opportunities for interaction with the other components of the project in country.

147. Ministry officials in the three focus countries. Ministry officials have been selected from the agriculture ministries and supported financially and technically by expert members of the CSA project in their involvement and learning about climate change and CSA at the UNFCCC COPs. Officials commented about the cumulative benefits of repeat visits by the same representatives: networks can be built and strengthened year on year. Attendance by multiple representatives was also welcomed as this enabled participation at more than one event at once (important with UNFCCC timetables) and also provided a 'critical mass' of representation on agriculture for that country, making a "louder voice" externally. One official made it clear that there is also significant benefit to the aims of their government ministries through this: accessing climate funding is all about relationships with the donors, all of whom attend the UNFCCC COPs. Countries need to compete for this funding, presenting their cases clearly and making themselves heard, so setting up these relationships is crucial in the steps required to enable funding streams to be opened.

148. Enumerators involved in the data collection in the household surveys. These groups have been trained in execution of the high quality surveys and data sampling methods that meet international standards.

149. In country participants to CSA training and information gathering workshops. These included ministry representatives, extension service officers and other stakeholders who participated in the scenario building workshop and in the carbon sequestration EX-ACT training. This platform provided information sharing opportunities and networking opportunities between participants. Further training activities for extension services will be performed in the following months on CSA practices.

150. Secondly, at an organisational level this project has focused significant resources. Ministerial capacity has been increased through increased knowledge sharing from the UNFCCC COP interactions with reporting back. The universities that host the students involved in the individual capacity building have benefited from increased contact with policy makers and FAO. This has a three way capacity-building impact between FAO and other organisations as increased information sharing and relationship building improves knowledge and influence of all three organisations that go beyond the reach of the project through changing and opening minds and institutional perspectives and revisions of strategies. For example, one university department in Malawi has begun a course in climate change since being involved in this project as a result of perceiving the importance of the topic and relevance to the students. Organisational level capacity had also been built through direct training and information sharing events: ministries, other stakeholders such as the Farmers' Union and extension services have been involved in scenario workshops and ExACT Carbon sequestration training. The influence of the project's new research framework has changed some institutional procedures. For example, in Zambia the statistical office has now included in the national statistical survey some of the information gathering questions that was initially being collected by the project survey. Local research stations in country have benefitted from increased analytical capacity on household economic and livelihoods issues, particularly farming and conservation agriculture.

151. Finally, the wider 'enabling environment' has already been impacted by this project, and has been a specific focus to several activities within this project. The main one of these has fostered policy dialogue between different ministries involved in climate change and agriculture: Ministries of Agriculture, Environment and Natural Resources, Finance and Land Use Planning. In general, clearly attributable effects of any project activity in influencing policy change are difficult to pinpoint due to the multiple factors involved. However, in Zambia there is a fairly clear "mappable" outcome pathway, that the policy dialogue fostered and facilitated by this project has led to a revision of the policy draft on agriculture in the direction of a better integration with the climate change draft policy. The ET noticed that in recent years the policy dialogue at ministerial level has certainly increased and that it is widely recognized that the project has given a positive contribution to this process. In addition, policy makers between departments are discussing agriculture and finance, and climate change independently of this project. Other donors are very active in this process at the moment, and have a longer timeframe attached to their work than the end of 2014. Thus the ET strongly recommends that the project team increase cooperation with other actors at the country level in order to increase possibilities for institutional uptake and sustained mainstreaming of the newly acquired capacities. In order to achieve this objective a stronger presence of PT members in countries is recommended in the final stage of the project.

5.5 Human-Rights Based Approach

152. This project has worked primarily at the national level in the three focus countries. The underlying premise of the project is that people will incorporate climate change and climate variability explicitly into agricultural policy with a view to improving food security – the availability of food supply, the stability (through climate-related adaptations) and also access and utilization through wider market and industry-related initiatives. Given that this project is working with government ministries relating to poor, rural farmers in those countries, the ET considers that the project is extremely well aligned with the human rights based approach. Most of the components of the project involve the participation in and shaping of public affairs, or the creation and dissemination of new information about agriculture and climate change with an emphasis on the poor and vulnerable. These results have already been documented. Whilst the project does not currently work directly and actively at the community level, research is expected to produce useful analytical findings about these farmers with a view to obtaining funding for tailored farm-level interventions regarding climate change to improve food security and livelihoods of the poor.

5.6 Partnerships and Alliances

153. The FAO developed a very strong design for partnerships and alliances in the project in order to deliver the outcomes required. Government ministries were sought as key partners. The strong engagement with the respective ministries of agriculture and other ministries is expected to continue beyond the life of this project. This is an impetus already in place, which the FAO project has stimulated, and ministries show strong support and understanding within the key staff involved on these matters. However, outside of the key focal points, where a substitute had to be interviewed in the case of non-availability of the key ministry staff member, the ET found that there was frequently a low level of knowledge or understanding of the project, and in one case a very limited understanding of the impacts of climate change on agriculture. This implies that strong capacity has been built in these institutions and fostered in these partnerships, but remains slim in its base within the ministries and would benefit from further strengthening and impetus.

154. Several supporting institutions for other activities were involved in the project. These included Universities, which were identified and brought in concretely. The Universities experienced some constraints in conforming to the FAO project timelines as their academic years are rigid. In future, a long lead in time to set up formal arrangements would be advisable in order to limit delays. It is unclear how far this partnership between FAO and the universities will be sustained beyond the end of the project. Some partnerships or information sharing was set up with the Farmers' Unions, conservation agriculture institutions, and other networks in country. However, other donors such as WB, UNDP and others working on climate change, including the EC country offices were not as engaged as the ET expected. This was due to staff changes in the involved institutions and lack of institutional memory, in addition to the FAO country office project staff feeling that whilst they do not have concrete results from the project to show due to the various delays, it is challenging to keep those relationships strong. There are plans to bring these potentially interested institutions together for an information sharing event in each country before the end of the project, including ministries, donors and university researchers, which the ET strongly supports as a recommendation.

6 Analysis by evaluation criteria

6.1 Relevance

155. The project objectives and design were consistent with the country government strategies. In Vietnam, the NAPCC indicates as a priority task the evaluation of the impact of climate change to each subsector of the agriculture and rural development industry. Further it calls for the development of regional programs/projects in each subsector that are feasible and respond (mitigate and adapt) to climate change and that create opportunities for development. Malawi is listed as one the twelve countries most vulnerable to the adverse effects of climate change in the world (World Bank, 2010). In Malawi the Agricultural Sector Wide Approach (ASWAp) clearly recognizes climate change as a key constraint to agricultural productivity and identifies strategies to mitigate the effects of climate change on agricultural productivity. Both the Malawi Growth and Development Strategy (MGDS) I & II emphasize the need for the country to mainstream climate change mitigation and adaptation measures in all sectors for improved resilience and sustainable development. Agriculture is noted as one of the most relevant sectors in the National Adaptation Plan for Action (NAPA). In Zambia within the Sixth National Development Plan (SNDP)(2011-2015), climate change has been recognised as an important cross-cutting issue and climate change activities related to adaptation and mitigation were mainstreamed across economic, services and social sectors. The National Climate Change Response Strategy (2010) on agriculture is to develop sustainable land use systems to enhance agricultural production and ensure food security considering changing climatic conditions. In Zambia climate change was not explicitly covered under the National Agricultural Policy (2004 – 2015), but it has gained relevance in the new draft.

156. The Project is in line with the priorities of the UNDAFs/One UN and NMTPFs in partner countries. The UNDAF 2008-2011 of Malawi has as its first cluster theme "Sustainable economic development and food security." The NMTPF (2006-2010) for Vietnam focuses, *inter alia*, on ensuring environmental and natural resource sustainability and promoting equitable and sustainable sector growth. The UNDAF for Zambia (2011-2015) includes in its Outcome 2 "to contribute effectively to increased access to sustainable livelihoods and food security in both rural and urban areas. Outcome 4 aims to achieve the development of institutional capacities to effectively sustain, manage and protect livelihoods from the risks of climate change, disasters and environmental degradation.

157. The Project is very much in line with FAO strategic objectives: SO1 help eliminate hunger, food insecurity and malnutrition (contribute to the eradication of hunger by facilitating policies and political commitments to support food security), SO2 make agriculture, forestry and fisheries more productive and sustainable (promoting evidence-based policies and practices to support highly productive agricultural sectors while ensuring that the natural resource base does not suffer in the process) and SO5 increase the resilience of livelihoods from disasters (prepare for natural and human-caused disasters by reducing their risk and enhancing the resilience of their food and agricultural systems).

158. The ET considers the project is very relevant with respect to a number of FAO Core Functions, as follows: 1. Facilitate and support countries in the development and implementation of normative and standard-setting, instruments, such as international agreements, codes of conduct, technical standards and others; 2. Assemble, analyze, monitor and improve access to data and information, in areas related to FAO´s mandate; 3. Facilitate,

promote and support policy dialogue at global, regional and country levels, 4. Advise and support capacity development at country and regional level to prepare, implement, monitor and evaluate evidence-based policies, investments and programmes.

Table2: Relevance of Output/Activity with respect FAO core functions

Core Function	Country Output		
	Malawi	**Zambia**	**Vietnam**
1. Facilitate and support countries in the development and implementation of normative instruments	+	+	+
2. Assemble, analyze, monitor and improve access to data and information	+++	+++	+++
3. Facilitate, promote and support policy dialogue at global, regional and country levels	++	+++	Not done to date [9]
4. Advise and support capacity development at country and regional level to prepare, implement, monitor and evaluate evidence-based policies, investments and programmes	+++	+++	+++

Key: +++ high relevance ++ reasonable relevance + low relevance

159. In order to increase project relevance to countries, the ET recommends that the investment proposal is integrated into existing investment plans for climate and agriculture, such as the CC Investment Plan draft for Malawi, utilizing existing adaptation and mitigation strategies on agriculture as an entry point for the concept of CSA.

160. For the reasons above the project has been rated very high in terms of relevance (average 5.7).

6.2 Efficiency

161. A number of aspects combine in a consideration of the project's efficiency. The first of these come under the area of management and implementation**.** Under management specific issues are scored under the project evaluation criteria. Firstly, the project's workplan was of high quality and focused. However, the timing of activities was incorrectly estimated, and this led to a delay in the inception of the project that has severely affected the initiation of the Zambia and Vietnam work. Once this work has been started, progress has ranged from good to excellent in most cases, with sensible remedial measures taken as required by the project team, indicating good communications and clear line management. For example, the existing household data for in Vietnam were found to be inadequate for purpose for the project; so a more detailed survey was designed. In Malawi, enumerators found that farmers were unwilling to spend more than 30 minutes on an interview, and adjusted the survey accordingly to fit this. Therefore, the ET found that the project team as a whole was able to make good, creative decisions to accommodate the existing situations as experienced in real

[9] Due to the absence of country visit and difficulties in organizing interviews with government staff the ET has not been able not evaluate the policy dialogue in VN although the PT states that a certain amount of policy work has been carried out.

time on the ground. One further example is that, in the absence of further data on carbon sequestration by region due to delays in one deliverable, some national approximations have been identified that will broadly serve if this other data does not become available in time.

162. There are some issues with the speed of execution of document reviews, decisions and some drop off in communication between FAO headquarters and the country offices. However, the headquarters staff has made a number of trips to each country at project inception, to run workshops and interact with stakeholders – this is not a project that has purely been run remotely. Despite this, as this project is not 'owned' by the country office, there is less understanding of the project as a whole, its functions and detail, than might be the case if ownership were more clearly shared. Budget has been provided for administrative support, but clearer budget lines and staff allocation, and transport allocation may provide further assistance.

163. The final area of consideration is that of the 'exit' strategy from the country offices. Because it is focused on a policy process and an incipient commencement of issues relating to CSA in country, it is essential that the exit strategy or continuation plan is well thought through and effective. Because of the delays to date, most country staff is very much focused on producing the deliverables still pending, and has not had much time to consider the future of the project's influence.

164. The second area of consideration is institutional set up, and efficiency in this. The ET scored the project highly on this, as the administrative and technical support through the organisation was good or very good. Steering bodies at a high level within FAO have provided some inputs to the project conceptually. Internal review processes have included country offices and HQ specialists. In terms of external institutional set up, input and support by the Governments involved in the project, this has been excellent. Coordination and identification of focal points in the ministries has been very good overall, and has facilitated the project substantially in terms of integration and policy dialogue processes. Whilst the roll out of the CSA manual has yet to be undertaken, the ET expects that this will be accessed by relevant ministry officials relatively easily, with substantive take up given sufficient lead-in time before the project end.

165. The budget allocations have been adequate to achieve intended results. Budget revisions were requested from the funders in order to allocate further funding to travel internally – not affecting the overall spending of the project. These were approved but caused some delays. The rate of delivery and budget balance in relation to work plans has been affected by the slow start of the projects and the staffing costs overhead despite this delay in the national government ministries.

166. However, the ET finds it difficult to think of an alternative to this situation given the difficulties of working with country national politics except for reducing the ambition of the project itself. It was not foreseeable to have such a significant delay, but perhaps some caveats and alternative situations could have been proposed at inception in case political progress was slower than expected. The ET does not suggest that the PT scale down ambition for the project, but that explicit recognition and analysis is undertaken at the project's conclusion of the successes in policy change as well as the hindrances, in order to assist those seeking similar policy change in other countries following on from this project's experience..

6.3 Effectiveness

167. A key output for EPIC (Output 1) is to build an evidence base for developing and implementing policies and investments for CSA. The underlying logic of taking this step is to build a conceptual and empirical foundation to design policies for and investments in CSA. With these activities in place, policies are more likely to be conceptually and empirically sound.

168. The logic of EPICs approach seems clear and suggests a carefully designed project. Here we assess the effectiveness of the project in achieving an evidence base. This is done in a series of steps. First, considering the conceptual foundation of the project that forms the basis for the empirical analysis and simulations. This is followed by an overall assessment of the data, information gathering and empirical analysis and then separately the simulations. Finally, a general view of the effectiveness of creating an evidence base is considered.

169. Taken together, the three conceptual models provide a strong basis from which to conduct simulation and empirical analysis. The first two models in particular add to the conceptualization of CSA adoption by incorporating more carefully the role of risk, the fact that techniques often require labour and short-term sacrifice rather than money, and the link to the public good nature of CSA. They are also conceptually linked, particularly through the incorporation of risk which is critical for understanding CSA adoption and policies that target that adoption. The third model provides less of a clear value added on its own and the link to the other models is tenuous at best. The value of the model in the overall project conceptualization is then unclear. Not only should the CGE model incorporate CSA more explicitly but that incorporation should be carefully linked to the other models.

170. With respect to the information gathering, the synthesis of the background literature both in general and for the specific countries, provides a reasonable overview of the state of knowledge with respect to CSA adoption and its impact. Further, the collection and analysis of secondary data to understand CSA adoption and its effects in Malawi and Zambia has provided important insights on the role of climatic variability on adoption and of knowledge and information provision via extension and other means. While the lack of secondary data from Vietnam limits the ability to conduct a careful analysis, clarifying the data availability is a useful exercise. Even in the case of Malawi and Zambia the available data is imperfect at best and suggests the need for renewed data collection efforts in the future. The ongoing collection of household-level data and its use in the CBA of technological options appears promising and an effective way to assess the feasibility of possibilities given the limited empirical evidence. Further, the process of thinking through the CBA analysis will help clarify issues with respect to adoption. Of course, both the empirical analysis and CBA exercise would benefit from the data on soil sequestration potential, which has yet to be delivered. Overall though, the data collection and analysis has been an effective means of providing evidence from which to base policies providing the final data collection efforts and analysis are completed.

171. The simulations for the farm-level and public goods model provide, or are likely to provide, useful insights into CSA adoption behaviour among farmers. Some of the simulations used for each model overlap although there are some differences and efforts could be made to make them more comparable where possible. Of course, this is dependent on the model structure and a complete overlap may not be possible. As the CGE model fails to incorporate CSA adoption, there is not a clear link to this model. The prior expectation for

the simulations was that the first two models would simulate the anticipated effects of policies and other factors on farm-level adoption and then the CGE model would take this output and simulate the general equilibrium effects of such adoption. At present, this does not occur and there is no link between the models. This appears to be a missed opportunity to address if policies linked to CSA adoption have broader economy wide implications. As such, it is a key weakness of the overall approach.

172. Taken together, the activities undertaken to develop an evidence base have been effective at making progress towards meeting that objective. However, there remain two significant concerns. The first is timing. While progress has been made, there have been substantial delays in getting data collected on soil sequestration and for the case of Vietnam. Even for Malawi and Zambia, the household data collection has been slow. This has meant delays in the analysis and that the CBA analysis has not even been initiated. This raises concerns about the ability of the project to deliver in a timely manner. The second and more complicated issue is one of coherence. Ultimately, a coherent set of policies needs to be put together based on the evidence base. At present, it is hard to see if and how the different components of the EPIC evidence will be put together. The synthesized literature, the conceptual models, simulations, empirical analysis and cost benefit analysis will all provide insights into CSA adoption and the impact of adoption as well as what policies might be employed to promote adoption. How these will be effectively synthesized into a coherent strategy is unclear at this stage as the research is not sufficiently developed to have a direct link to policy making. First the simulations, data analysis and CBA need to be completed. Second, the research implications need to be drawn together in some sort of unified framework. The ET recommends that EPIC team puts together a brief concept note (internal) on how to bring these together in the final months of the project. This note should help in providing some guidance to consultants and local project coordinators.

6.4 Sustainability

173. Several aspects of sustainability are considered. Economic and social sustainability of the project are currently considered inadequate. Regarding economic sustainability, the project has no plans in place for further funding, and it is clear that this is the beginning of a significant process of change on CSA in the countries affected, which will benefit greatly from continued inputs at this stage to push policy and practice through to implementation in the next 3-5 years. The PT mentioned the possibility of NORAD (Norwegian Agency for Development Cooperation) and SIDA (Swedish International Development Cooperation Agency) funding, but that this is still uncertain (especially the timing) and could cause a funding gap that would lead to a loss of the capacity built in the countries. To ensure social sustainability, more work needs to be done on achieving funding on CSA in these countries in terms of identifying donors, setting up agreements, following up and supporting government institutions until internal capacity is sufficient and self-supporting and internally generating.

174. In terms of evidence on institutional uptake and mainstreaming of the newly acquired capacities, and/or diffusion beyond the beneficiaries of the project, the ET considers that capacity and awareness of CSA has increased in government ministries, albeit in a fairly thinly layered base in some cases. Concepts are being taken on board about climate change and agriculture in government, verbally, in institutional set of Technical Working Groups on these issues, and in terms of documentation produced. Amongst beneficiaries of the project, one university has changed one of its courses to include climate change as an unexpected

impact; but in general there is no financial sustainability generated as a result of the project. Students will receive funding but there is no further source of funding identified.

175. The project is expected to contribute in the longer term to sustainable environmental management through better agricultural techniques, and policy support that will degrade the land less through applied CSA techniques.

6.5 Impact

176. **Institution and policies.** One of the major contributions that the project has made so far has been raising awareness of the impact of climate change in agriculture and vice versa at national policy level in country. This has developed in increased policy dialogue, network building and potentially policy change. The process has involved the ministerial level, the CSO/donor level, and research institutions and extension services. Particularly in Zambia the process has determined changes in the draft agricultural and climate changes policy documents aimed to greater integration of strategies. The ET interviewed officials from government ministries who confirmed the role of the project in pushing the dialogue forward as an effect of the initiative taken in May 2013. The policy dialogue on those drafts is still on going and involves other actors and further impacts of the policy dialogue would be expected by the end of the project.

177. A second major contribution of the project has been to create the in-country evidence base on CSA supplementing current information on the practices that farmers are adopting to cope with CC. In Zambia the Office of National Statistic will continue to maintain this evidence base; the maintenance and update of the evidence in other countries needs to be confirmed by the end of the project in the other countries.

178. **Human and social capital.** It is challenging to fully evaluate impact on human and social capital at this stage in the project. At this stage the ET observed that University students and ministry officials have received training and increased in knowledge through studies and attendance at high-level international meetings. There is the potential for strong impact expected from on-going activities including the training of trainers on CSA and scenario building workshops.

179. **In order to increase social impact (understanding of CSA/knowledge and uptake on the ground by farmers),** the ET recommends that training in the use of the CSA manual is extended to trainers including farming unions and NGOs and linked private-sector institutions such as CASU in Zambia. The ET also recommends that project follow up will include developing training material on CSA practices to be used at field level as leaflets in local languages. This would allow the project to reach a larger number of beneficiaries and therefore increase the social sustainability and impact of the project.

180. Finally in terms of impact, the ET assessed how far the project contributes to firstly, FAO's Strategic Objectives and Organisational Outcomes and secondly, FAO's Core Functions. Relating to the first of these, the key Strategic Objectives relevant are 1 (food security), 2 (sustainability) and 5 (resilience). The relevance of the project to FAO's objectives is high, as discussed above. There has been internal integration within FAO HQ with technical discussions and steering groups. However, to date the impact of that project work relating to FAO has not been high as the evidence base is recently emerging from the

project. This should also be a consideration for the project team in the final months of the project.

181. In terms of contribution to FAO core functions, data analysis, capacity building and facilitating partnerships are absolutely central to the concept, design and implementation of all stages of this project. Again, similarly, impact of this project on FAO and their core functions is limited as the project's evidence is not yet complete. There is strong potential for impact given the centrality of capacity building and partnerships building in the project. The ET recommends that the PT reflect on this and consider how to ensure FAO has an internal awareness-raising and uptake of the findings of this project.

182. **Institution and policies.** One of the major contributions that the project has made so far has been raising awareness of the impact of climate change in agriculture and vice versa at national policy level in country. This has developed in increased policy dialogue, network building and potentially policy change. The process has involved the ministerial level, the CSO/donor level, and research institutions and extension services. Particularly in Zambia the process has determined changes in the draft agricultural and climate changes policy documents aimed to greater integration of strategies. Interviews have confirmed the role of the project in pushing the dialogue forward as an effect of the initiative taken in May 2013. The policy dialogue on those drafts is still on going and involves other actors.

183. A second major contribution of the project has been to create the in-country evidence base on CSA supplementing current information on the practices that farmers are adopting to cope with CC. In Zambia the Office of National Statistic will continue to maintain such evidence base.

184. Key messages from the project need to be delivered simply and clearly for farmers and policy makers.

185. **Human and social capital.** Currently it is challenging to fully evaluate impact on human and social capital at this stage in the project. University students and ministry officials have received training and increase in knowledge through studies and attendance at international meetings and the training of trainers on CSA. ET recommends that training in the use of the CSA manual is trainers belonging to organizations/agencies as farming unions and NGOs.

186. Finally in terms of impact, the ET assessed how far the project contributes to firstly, FAO's Strategic Objectives and Organisational Outcomes and secondly, FAO's Core Functions. Relating to the first of these, the key Strategic Objectives relevant are 1 (food security), 2 (sustainability) and 5 (resilience). The project contributes squarely to all these three objectives in terms of providing a body of evidence that assesses potential for different agricultural options that will maintain food security in regions which are very vulnerable to climate change, and improve the livelihoods of farmers. In addition, the project provides an evidence base for policy change and implementation around bringing climate change into agricultural policy and vice versa in developing countries that reveals opportunities and difficulties experienced. There are several organisational outcomes under each of these strategic objectives. There is good alignment of the project with these, and also with specific outcomes for the 2014-2017 period. The ET scores this at its maximum of 6.

187. In terms of contribution to FAO core functions, data analysis, capacity building and facilitating partnerships are absolutely central to the concept, design and implementation of all stages of this project. The ET scores this at its maximum of 6.

7 Conclusions and Recommendations

7.1 Conclusions

188. The project has contributed significantly to raising awareness of the impact of climate change in agriculture and vice versa at national policy level in the selected countries. This is evidenced in increased policy dialogue, network building and potential policy change. The process has involved the ministerial level, the CSO/donor level, and research institutions and extension services. The ET finds also that the project timing is very effective for in-country impact on integration of agriculture and CC policies.

189. The combination of the collection of a meta-database and country-specific literature reviews has provided a strong foundation for developing an evidence base for policies and investments for CSA. The ET considers that the ongoing collection of household-level data and its use in the analysis of costs and benefits of technological options appears promising and an effective way to assess the feasibility of possibilities given the limited empirical evidence. Both the empirical analysis and the CBA exercise would benefit from the data on soil sequestration potential, which has yet to be delivered.

190. The simulations for the farm-level and public goods model provide, or are likely to provide, useful insights into CSA adoption behaviour among farmers. The EPIC team did an excellent job of collecting and analyzing data and synthesizing the literature on CSA, and their activities highlight the stark limitedness of available evidence. This emphasises the need for continued and expanded efforts to generate CSA knowledge for improved policies and projects.

191. Some delays in the activities on developing an evidence base for CSA raise concerns about the ability of the project to deliver within the timeframe. A second and more complicated issue is one of coherence. At present, it is unclear how the different components of the EPIC evidence will be effectively synthesized into a coherent whole CSA strategy as originally envisaged.

192. There have been some changes in the activities in the initial project including: 1) the inclusion of new topics; 2) the choice to have a regional focus in Vietnam; 3) the re-thinking of the data collection strategy in Vietnam; and 4) the addition of a new activity of developing and testing a training manual on CSA. The ET agrees that these changes demonstrate the EPIC team's ability to respond to changing contexts and circumstances, and these have improved the effectiveness of project outputs on the whole in relation to project objectives. The ET found that, in general, the project team has been able to make good, creative decisions to accommodate the existing situations in order to increase project's effectiveness and management efficiency.

7.2 Recommendations

193. The MTE makes several recommendations for improving the effectiveness of the project and better enabling it to pursue its theory of change for the remainder of the project. The project has experienced severe delays because of late project approval in project countries. Despite the best efforts of very capable national coordinators and the HQ team to attempt to recoup this time, there remains an issue. Considering that most of the activities are expected to be completed in the next few months there is a severe risk that there will not be enough time for adequate dissemination of project results and mainstreaming into government decision processes.

Recommendation 1: To the Project Team and the Donor for <u>overall project outcome success</u>

Extend the project for a period of six months in order to strengthen the sharing of information and learning in country, the coherence of the project results and in order to achieve the overall outcome of the project.

Recommendation 2: To the EPIC team for <u>improving the evidence base</u>

e. Adjust the CGE model to explicitly include CSA adoption, and directly link the CGE simulations to the outputs from the farm-level and public goods model simulations in order to assess if widespread CSA adoption will have economy-wide effects.

f. Consider the link between the different levels of analysis and models and provide a single document summarizing and synthesizing into a coherent set of recommendations the insights provided by the analysis and models.

g. Consider what future information and data collection would be appropriate for expanding the understanding of CSA adoption both in the selected countries and elsewhere. This is likely to involve expanded general data collection, but also impact evaluations of CSA projects that will be implemented in the field to determine lessons that can be learned.

h. Validate at country level the results from policy models with local experts.

194. Regarding the investment proposals that will be generated, it is important that the EPIC team focus on their internal coherence and realism, and also how they could be easily and clearly shared with others.

Recommendation 3: To the EPIC team for improving the investment proposal in its coherence and ability to be implemented

d. Take into account in the proposal the availability of new technologies, e.g. improved seeds at the farm level. A broader consultation with private sector stakeholders would help to understand this context.
e. Integrate the investment proposal generated by FAO into existing investment plans for climate and agriculture. This means some degree of cooperation and stakeholder engagement is required now and planning for how this will be taken forward in the period after the project.
f. Assess the funding possibilities for the proposals by the end of June 2014 and ensures a plan is in place, with adequate staff time allocated, to seek an audience with strongest potential donors and request funding. In-country follow up of the proposals would also benefit from greater involvement of the FAO Country Representatives in the final stage of the project, considering their participation in various institutional fora on CC and agriculture and their cooperation with other donors in other related on-going projects.

195. The ET suggests that a focus on capacity building in country would increase: i) the number of project beneficiaries; ii) the social sustainability of the project; and iii) impact on human capital. Currently CSA is not reflected in implementation at local level in country.

Recommendation 4: To the EPIC team for improving capacity building in country

c. Extend the training in the use of the CSA manual to trainers belonging to private organizations/agencies including farming unions and NGOs.
d. Follow up by country coordinators with local level decision makers to increase awareness and address the issue of policy capacity-building at local level.

196. For reasons discussed earlier in this report, the national universities were delayed in setting up the funding for the Masters and PhD students as part of this project. The capacity building work with students has been administratively time consuming – however the ET considers that this is potentially an important capacity building activity, and is keen to emphasise that capacity building impacts from this will become fully apparent only at project end/after the project end.

Recommendation 5: To the EPIC team for improving project deliverables from the National Universities

d. Disseminate proposal content and preliminary research findings, if available, before the project end date in-country through key stakeholder meetings.
e. Undertake policy brief writing training before project end date to assist students in this challenging undertaking.
f. Install adequate financial administrative arrangements are agreed with the University as activities will be concluded after the project end date.

Recommendation 6: To the EPIC team for integrating soil sequestration data

Put in place all the possible efforts to integrate the delayed soil sequestration data into the models as soon as possible. Further delay of this activity could seriously compromise the overall project outcome delivery.

197. There are other recommendations, which are appropriate to improve the sustainability of the project in future follow up or impact on institutions and on human capital. These include:

Recommendation 7: To the EPIC team for capacity building and dissemination of results

Strengthening the contacts between COs, ensuring that results are disseminated and discussed, including virtually.

198. ET noted a very high level interest in country – especially in Malawi and Vietnam – for the training extension activities on CSA. The ET also recommends that project follow up will eventually include developing training material on CSA practice to be used at field level as leaflets in local languages. This would allow to reach a larger number of beneficiaries and therefore to increase social sustainability and impact of the project. Separately, the ET noted that students would benefit from more involvement and discussion of their research with others doing similar work.

Recommendation 8: To the EPIC team for capacity building in-country

c. Include interested stakeholders in country on the activity on CSA manual training.
d. Consider financing students from Zambia and Malawi to meet, sharing research methodologies and findings. Or at the least, foster online collaboration. This recommendation aim to increase project impact on university institutions as it could foster future collaboration on research and teaching activities especially between Zambia and Malawi. This will increase the impact on human capital as students would benefit from international exchange.

Recommendation 9: To the EPIC team for disseminating information ensuring full uptake of results

e. Further elaborate the visibility plans for this year, with a strong focus on dissemination of flagship publications in two ways:
f. Firstly, nationally in- country through the national coordinators and all existing networks on climate change and agriculture, including through FAO country representatives who can disseminate project findings at high level amongst partners and ministries and other influential bodies such as Steering and Technical Committees on Agriculture and Climate change
g. Secondly, internationally through Climate Smart Agriculture Alliance meetings, Climate Smart Agriculture conferences and side events at the COP if possible in the Agriculture and Rural Development days, or similar
h. Considering the large platea of stakeholders involved (policy makers, government officials, universities, research and statistical Institutions, private and public technical

assistance, international donors, civil society) products should be tailored considering the specific use that is expected.

7.3 Lessons Learned

199. **Lesson 1: Entering the political arena in countries is tricky, delicate and can be time-consuming.** The PT has demonstrated considerable success in terms of encouraging policy change in Malawi and Zambia through different strategic approaches to specific contexts. This has required investment of well-positioned staff in country that is able to maintain networks with those in the government ministries and other organisations over time, often bringing these networks from their previous roles. With a short life project of 3 years it is possible to have a delay of 1 year whilst awaiting a mandate for activity. In this case, it can impact the ability of the project to achieve its original aims fully. So having the right people who are able to understand and negotiate the policy process quickly and effectively is a critical element, Project planning should allocate adequate timing to building the right country level engagement and identifying best partners to engage.

200. **Lesson 2: Capacity building on policy at local level merits more attention.** Currently, the focus on policy change in agriculture and climate change is at the national level as this is where decisions on funding are taken, and investment that is then implemented at district and local level. But the construction of an evidence base at local level needs to be accompanied by an equal effort to move from developing strategies at the international and national level to their implementation at the district level. In this way, national level policies will be connected to the evidence base, and people will start to understand and work with the issues at local level. Institutional mapping at local level and national level, combined with institutional data analysis is fundamental in providing guidance on how to fulfill this objective.

201. **Lesson 3: More scope needed for private sector engagement.** Public sector engagement is critical to the project's success, and increasingly, projects on CSA should adequately consider the role of the private sector, i.e. the agribusiness sector producing and distributing inputs as seeds and fertilizers, and the role of smallholders as private sector small scale commercial producers. This is likely to be an important player in the development and implementation of responses to CC in agriculture. This is true for areas such as the supply of inputs as improved seeds and other technologies, but it is also possible for the role that the private sector can play related to carbon finance actions.

202. **Lesson 4: High quality research deliverables deserve significant dissemination time planned into project lifetime.** The Project is succeeding in producing a large number of deliverables, many of which are of high quality. The lesson learned is that there needs to be a long 'lead out' time allocated for the dissemination of high quality output deliverables to ensure that they will be disseminated fully within the lifespan and funding of the project.

203. **Lesson 5: Future replication or upscaling of the project (if funds were available) will need to be capacity-strengthening at national level for the use of models in order to promote greater national ownership.** Repeating the economic model would be unnecessary,

but a minimal amount of data gathering and analysis would be required. This would require gathering secondary data as has been done in these cases and ideally replicating the CBA process with targeted data collection to see where the returns to CSA are most likely.

Annexes to the evaluation report

Annex 1. Profile of Team Members

Annalisa Zezza, Team Leader – Dr Annalisa Zezza is an agricultural economist expert on Agro-environmental policies, Head of Research at the Italian National Institute of Agricultural Economics in Rome.

Natasha Grist – Dr Natasha Grist is an expert on Climate Smart Agriculture in Africa, and is a Research Fellow in Climate Change and Agriculture based at the Overseas Development Institute in London.

Paul Winters – Dr Paul Winters is a professor in the Department of Economics at American University, Washington DC, with an expertise in the empirical analysis of rural poverty and poverty targeted programs in developing countries.

Annex 2. Evaluation Terms of Reference

Background of the Project

Climate change is increasingly being recognized as one of the biggest challenges of our time. The challenge is particularly daunting in the agriculture sector, given its key role for food security and livelihood but also its high sensitivity and dependence on climate. In a bid to sustain agricultural production in the face of climate change and recognizing that agricultural development and climate change cannot be tackled in isolation from each other, the Agriculture and Economic Development Division of FAO launched in January 2012 a three year project co-funded by the European Commission and FAO titled "Climate Smart Agriculture: Capturing the "Synergies between Mitigation, Adaptation and Food Security."

Rather than taking a single-focus approach, the project is based on the notion that food security, agricultural development, climate change adaptation and mitigation need to be addressed together, rather than separately, in order to capture potential synergies and manage possible trade-offs across these closely linked areas. This is at the heart of the concept of climate-smart agriculture (CSA), that FAO uses. The concept encompasses sustainable agriculture, expanding it to include the imperative for climate change adaptation, the potential for mitigation and the need to consider the technical, policy, institutional and financing implications of such inclusion. A crucial innovation the project tries to make is that the it is not solely based on pure research or on pilot practices, but combines research with policy analysis with the final aim of attracting funds for CSA investment proposals tailored to country needs and based on evidence and analysis conducted.

The project works with governments, local institutions and universities in some of the poorest regions of Malawi, Zambia and Vietnam. Its main goal is to support these countries in securing the necessary technical, policy, and financial conditions to be able to: 1) sustainably increase agricultural productivity and incomes, 2) build resilience and the capacity of agricultural and food systems to adapt to climate change, and 3) seek opportunities to reduce and remove GHGs to meet national food security and development goals.

To achieve these objectives, the project starts from: a) developing an evidence base drawn from socio-economic, land use and climate data, as well as from institutional, policy and project/programme analysis. The evidence provided will serve to: b) underpin the identification of promising practices, c) identify adoption barriers to remove and d) help managing risk for smallholders. All outputs so produced will contribute to developing country-owned strategic frameworks for investment in CSA activities, which in turn culminates with the elaboration of f) CSA investment proposals including identification of potential funding sources for each country.

Implementation arrangements

The Project's institutional structure consists of a Project Team based in the Agricultural Development Economics Division (ESA) at FAO headquarters and in the FAO- Offices of the three partner countries. The Project Team is under the overall supervision of the ESA Economics and Policy Innovations for CSA (EPIC) Team Leader (P5) and it is composed of a

P5 Project Leader, P4 Project Coordinator, two P3 Economists and a P2 Project Officer. Each partner country also has a Country Technical Coordinator.[10]

The Project Team is responsible for the overall coordination of the Project with FAO regional, sub-regional and national offices, as well as across relevant units within FAO headquarters and external partners. Close working arrangements with national staff, consultants, research institutions, universities and other organizations are always sought.

In addition, and to better reflect the three major components of the project: research, policy and institutional strengthening, aside from the core Project Technical Team described above, specialised consultants for research work, geographic Information System (GIS) and Investment/Financing have been externally recruited. A Policy Specialist has also been externally recruited to help facilitate dialogue across countries and between FAO and ministries, and to support representatives of partner countries Ministries of Agriculture to participate to international Climate Change negotiations.

In each of the partner countries, the Ministry of Agriculture (MoA) is the main policy partner for the Project, with close linkages to other relevant ministries (i.e. of Environment, Development Planning and Finance). In Malawi this is the Ministry of Agriculture and Food Security (MoAFS), in Zambia the Ministry of Agriculture and Livestock (MAL), and in Vietnam the Ministry of Agriculture and Rural Development (MARD). In each case, the partner country has designated a department and staff person to be the focal point for the Project and have constituted core team to approve project progress, provide advice and validate activities and outputs. In addition, in each country, a research partner institution has been identified and involved in the project. These include: Bunda College in Malawi, University of Zambia in Zambia, and Thai Nguyen University of Agriculture and Forestry in Vietnam.

Moreover, the Project Team has established an Interdepartmental Technical Task Force (ITTF) at FAO headquarters involving relevant FAO Units and has had informal and ad hoc meetings to review work plans and thematic reports and documents, in addition to seeking for advice and comments when needed.

The total budget of the project is EUR 5.3 million. Financial contribution from the European Commission amounts to EUR 3.3 million whereas FAO is contributing with EUR 2 million of which:

- EUR 0.9 million is provided through staff time, offices, equipment and the use of FAO representations in-countries, whereas
- the remaining EUR 1.1 million is provided by SIDA[11] under FMM trust fund.

Partner countries have engaged with the project through the provision of political support and commitment to the Project objectives, participation of national policy and research staff in Project activities and the provision of office space for the Project in country.

[10] In Viet Nam, further support is provided by one national coordinator and a UN Volunteer.
[11] Swedish International Development Agency.

Project progress and milestones

The project cites the following important progress made since it began.

Developing an Evidence Base

The evidence base is being constructed and has made good progress particularly for the countries of Zambia and Malawi as opposed to Viet Nam where secondary data were not available and a different strategy had to be elaborated and is currently being implemented. The evidence so far produced has been obtained through:

- data analysis at household level combined with geo-referenced, institutions and climatic data which allows the identification of main drivers and barriers to the adoption of CSA;
- collection of costs and benefits of CSA as opposed to conventional agriculture to identify potential impacts, net costs/benefits and identification of best bet options clustered by agro-ecological zone.
- Elaboration of a risk management model for which data are being processed and will be analyzed;
- Calculation of mitigation potential at country level using ad hoc tailored software and for which data will have to be collected and merged with existing other data sets to identify synergies and trade-offs with adaptation and food-security.
- Value chain analysis for coffee and tea in the Northern Mountainous Region of Vietnam.

Capacity development

One of the key areas of the project is also to develop country's capacity to adopt CSA. This is being done through three main approaches:

- Support to MSc and PhD students in each partner country to undertake research in areas of relevance for the project;
- Provide training to agricultural frontline staff and other stakeholders. These are identified through capacity needs assessment and requests for training coming from country's core team and are delivered through local consultants who utilize CSA project's own outputs and material tailored to country specific situation.
- Support to policy makers to participate to international climate change negotiations as better explained below.

Policy dialogue

Staff from ministries of agriculture have been designated by their respective agriculture ministries in each of the partner country, and clearance obtained from national UNFCCC focal points in ministries of environment, to participate in the UNFCCC multilateral negotiations on climate change. The project Senior Policy advisor prepares, prior to each session, a briefing note on the items of relevance to agriculture and the positions of country grouping.

In addition, greater policy harmonization between national climate change and agricultural policies is being facilitated in Zambia and Malawi through policy dialogues between Ministries of Agriculture and the Environment organized by the CSA Project. The dialogues

have been conceived and prepared jointly by the Senior Policy advisor of the project, the project technical coordinators and focal points, with the aim of reducing fragmentation and inconsistencies of policy messages and of strengthening alignment and coherence between the policies in order to enable them to be more mutually reinforcing.

Scenario Building workshops: The project is collaborating with the CGIAR programme on Climate Change, Agriculture and Food Security (CCAFS) on developing and quantifying participatory scenario analysis. Purpose of this collaboration is to formulate, with the help of key stakeholders, plausible futures for each of the partner countries and identify how current factors and trends might play out. The scenarios process focuses on contextual drivers of change for agriculture and food security – climate change and socio-economic changes (e.g. in markets, governance, broad economic developments, infrastructure) - enabling relevant societal actors to participate in an analysis of the contextual factors of change for food security, livelihoods and environments and linking the various components of the project.
Scenarios are a tool for generating shared engagement and build relationships and commitments from key stakeholders and policy makers, allow using project's outputs and link the various project components. Moreover they are also going to be used for quantifying potential futures identified.

Investment proposal: with inputs coming from the various activities being undertaken, a draft investment proposal is currently being formulated and it will be further refined once results from the cost and benefit analysis will be available as well as using outputs coming from the quantification of models linked to the scenario built.

Finally, an M&E framework for the project has been developed and is being used; country-specific communication plans in consultation with country technical coordinators and local experts have been elaborated and various contracts with consultants and Letters of Agreement (LOAs) with partner institutions, who are currently undertaking planned project activities, have been signed.

The project's natural progress would be to evolve into a potential second phase whereby two tracks can be identified:

- Investment proposals formulated for partner countries are funded and implemented. For this track the project would be interested in following up on the implementation and adoption of identified CSA options in partner countries;
- Other countries adopt same project approach. In this case the most interesting question would be how to replicate the project, its activities and outputs in other countries in a simplified fashion.

Purpose of the Evaluation

The purpose of this mid-term evaluation (MTE) is to review the progress made towards achievement of outcomes in accordance with the full project document and to identify corrective actions if necessary. The MTE should assess the project from its concept and design to current and potential results and include recommendations for filling gaps not covered yet by the project. The evaluation should also provide a basis for learning and accountability for managers and stakeholders and serve as an input on how to effectively up-scale the project and further refine the methodology being used, as appropriate.

At this mid-term point, the project is to have produced the evidence base for determining CSA practices. This evidence base is to consist of primary and secondary data at household, community, climatic, geographical and institutional levels, analyzed with specially tailored economic models. The CSA practices are needed to shape national policy, and develop the countries' CSA strategic frameworks and investment proposals. In view of the stage the project has reached, and its objectives regarding the use of the information generated, the MTE would provide help by assessing the following:

- The quality, usability and relevance of the primary and secondary data being gathered for identifying genuine and feasible CSA options;
- The adequacy, effectiveness and capacity of analyses and models being employed to produce the desired evidence base;
- The project's strengths and capabilities to link research on CSA to policy-making, i.e. to synthesize and translate the evidence that is being produced into policy messages, policy implications, strategic frameworks and investment proposal for the country;
- The scope and opportunity for simplifying data gathering, analysis and requirements, and economic modeling, and managing the project in countries where weak data is provided, were the project to be replicated in other countries or were other countries to be interested in assessing the opportunities to invest in CSA.

Evaluation framework

Scope

In close agreement with FAO Office of Evaluation (OED) and with approval of the European Commission funding the project, the independent mid-term evaluation (MTE) will be undertaken at the end of the second year of project implementation followed by a Validation Report at the end of the project life. The latter will look at the progress made with respect to the MTE and at the project's responses to recommendations raised through it. The MTE will determine progress being made towards achievement of outcomes and will identify corrective actions if necessary.

It will, inter alia:

review the effectiveness, efficiency and timeliness of project implementation;
analyze effectiveness of implementation and partnership arrangements;
identify issues requiring decisions and remedial actions;
identify lessons learned about project design, implementation and management;
highlight technical achievements and lessons learned;
analyze whether the project has achieved any of the benchmarks for setting up a potential second phase;
propose any mid-course corrections and/or adjustments to the Work Plan as necessary.

The MTE will assess the project from its concept and design, through its evolution and to the current and forecasted results. In terms of geographical coverage, given delays and difficulties in the start-up of the project for the country of Viet Nam as well as its geographic distance from the other two countries, the MTE will include brief missions to Zambia and Malawi. For Viet Nam, it will conduct a desk-review of documents, interview project staff and possibly speak with a select group of stakeholders in the country through teleconference. Because the exercise is an MTE, it may be difficult to derive conclusions regarding the sustainability and impact of the project.

Evaluation criteria

The project will be critically assessed through the internationally accepted evaluation criteria, i.e. relevance, efficiency, effectiveness, impact, and sustainability. In line with the new FAO project cycle, the evaluation will assess compliance with the following UN Common Country Programming Principles: Environmental sustainability, Capacity Development, Gender equality and Results Based Management. It is, however, important to bear in mind that the project focuses on Climate Smart Agriculture and that, while high relevance is given to the environmental sustainability and capacity development aspects, other crucial aspects such as gender equality are not directly addressed or analysed within the project scope but will be taken into consideration to the extent they are included into project activities (i.e. for example gender equality in training delivered, or gender composition of data collection team etc.). Additional important characteristics to take into account in conducting the MTE are: robustness, clarity, coherence, realism and technical quality.

Evaluation issues

Relevance of concept and design

Project relevance to:

- national/regional development priorities, programmes, needs of the population;
- Country economic, institutional and capacity-related contexts;
- UNFCCC negotiations and IPCC framework;
- NAMAs, NAPAs, ASWAP, PRSPs and other relevant policy papers;
- UNDAFs;
- Current approaches to climate change adaptation and mitigation in agriculture, in other international development, research and academic institutions;
- FAO Country Programming Frameworks;
- FAO Global Goals and Strategic Objectives/Core Functions;
- CAADP and other aid programmes in the sector.

Robustness and realism of the theory of change underpinning the project;

Clarity, coherence and realism of the Logical Framework[12] of the project and of its design, including:

- The causal relationship between inputs, activities, outputs, expected outcomes (immediate objectives) and impact (development objectives);
- Validity of indicators, assumptions and risks;
- Approach and methodology, as discussed under Section 2 above, and including country selection;
- Resources (human and financial) and duration;
- Stakeholder and beneficiary identification and analysis;
- Institutional set-up and management arrangements.

Effectiveness of outputs and outcomes

[12] The Logical Framework embodies the Results-Based Management approach in a project

Overall effectiveness of the project, actual or potential, in attaining its intermediate/specific objectives. In particular the following key outputs and main achievements should be assessed in view of their contribution to the achievements of the expected project outcomes:

Evidence base

Databases constructed and documented of existing household-level datasets with information relevant for adaptation and mitigation being used for analysis;

Stocktaking of CSA related projects carried prepared for each country and other relevant qualitative information compiled in a systematic way;

Data collection tools used for crop budgets estimate including questionnaire developed, sampling strategy, and shortlist of CSA practices selected;

Institutional-level datasets constructed;

Risk management model constructed;

Model for measuring mitigation potential and for constructing data base for soil carbon sequestration linked to HH data set;

Adoption models utilized for conducting analysis and reported in working papers and articles;

Value chain analysis for shan-tea and coffee in the NRM;

Working papers and briefs produced.

Country owned strategic framework

Quantified and calibrated scenario which links various project components constructed through CCAFS scenario building workshops;

Policy briefs on the role of agriculture within UNFCCC negotiations for partner countries;

Report of map of CSA decision makers' networks and linkages;

Documentation for facilitated policy dialogue including final report and communiqué;

Comprehensive review of PRSPs, NAPAs, NAMAs and other relevant policy papers.

Capacity to implement CSA:

Training material and strategy for capacity development;

Report from MSc and PhD students being supported;

Web shared platform;

Knowledge sharing platform proposal.

Investment proposal and funding:

Crop budget estimates;

Best bet options identified;

Draft investment proposal and report from investment specialist;

M&E system in place.

- Description and analysis of the outcomes achieved, expected and unexpected, their robustness and expectations for further uptake and diffusion[13], whereby the main project outcome is represented by increased capacity for countries to promote and access CSA including financing.
- Use made by the project of FAO's normative and knowledge products and actual and potential contribution of the project to the normative and knowledge function of the Organization. In particular, the team will assess the use made by the project of

[13] 'FAO projects should have (only) one outcome. Programmes may have more.' From FAO Project Cycle Guidelines, 2012

specific normative tools and methods and technical documents developed by the Agricultural and Development Economic Analysis Division as well as by the interdepartmental working group on Climate Smart Agriculture and other technical Divisions and in decentralized offices in the partner countries.

Efficiency and effectiveness of project implementation process

Assessment of project management:
- Quality, realism and focus of work plans;
- Assessment of delivery, causes and consequences of delays and of any remedial measure taken, if any;
- Monitoring and feed-back loop into improved management and operations;
- Staff management;
- Development and implementation of an exit strategy;

Institutional Setup:
- Administrative and technical support by FAO HQ, regional, sub-regional and country office, as appropriate;
- Institutional set-up, internal review processes, coordination and steering bodies;
- Inputs and support by the Government/s and resource partner/s.

Assessment of financial resources management, including:
- Adequacy and realism of budget allocations to achieve intended results;
- Adequacy and realism of Budget Revisions in matching implementation needs and project objectives;
- Rate of delivery and budget balance at the time of the evaluation and in relation to work-plans.

Analysis of the application of the UN common country programming principles, cross-cutting themes, and of the Humanitarian Principles

Analysis of gender mainstreaming for gender equality to the extent the project addresses or include gender aspects. This will include:
- Extent to which the role of women and gender issues in agriculture were considered in designing protocols for gathering household data;
- Degree to which the potential impacts on women and gender relations were examined in identifying potential CSA options;
- Extent to which gender equality considerations were taken into account in project team selection and implementation and management.

Analysis of the Capacity Development dimension in the design, implementation and results of the project, at individual, organizational and enabling environment levels.[14] This will include CD on both technical and soft-skills, i.e. data-gathering and -entering and analysis, but also on CSA concepts and applications for counterpart staff and policy makers, participation in UNFCCC negotiations, and more broadly, regarding the creation of an enabling environment for the different concerned ministries (i.e. agriculture and environment) to work jointly on CSA .

[14] See: http://www.fao.org/capacitydevelopment/en/

Analysis of Partnerships and Alliances, namely:
With national ministries, and research, academic and implementation partners, and how they were planned in the project design and developed through implementation;
their focus and strength; and
their effect on project results and sustainability.[15]

Specifically, the partnerships and alliances were with the following institutions:
Bunda College of Agriculture in Malawi;
The University of Zambia;
Thai Nguyen University of Agriculture and Forestry in Vietnam;
Northern Mountainous Agriculture and Forestry Science Institute (NOMAFSI) in Viet Nam;
The Institute of Policy and Strategy for Agriculture and Rural Development (IPSARD) in Viet Nam;
The University of Aberdeen;
CGIAR programme on Climate Change, Agriculture and Food Security.

Analysis of how environmental impacts were taken into consideration and addressed, following the steps and criteria contained in the FAO Environmental Impact Assessment guidelines.

Impact

Overall impact of the project, actual or potential, positive and negative, produced directly or indirectly, intended or unintended; and
Overall contribution of the project to FAO Country Programming Frameworks, Organizational Result/s and Strategic Objectives, as well as to the implementation of the corporate Core Functions.

Sustainability

The prospects for sustaining and up-scaling the project's results by the beneficiaries and the host institutions after the termination of the project. The assessment of sustainability will include, as appropriate, the following as well as the questions listed under Section 2:

- Institutional, technical, social and economic sustainability of proposed technologies, innovations and/or processes;
- Expectation of institutional uptake and mainstreaming of the newly acquired capacities, or diffusion beyond the beneficiaries or the project;
- Environmental sustainability: the project's contribution to sustainable natural resource management, in terms of maintenance and/or regeneration of the natural resource base.

Based on the above analysis, the evaluation will draw specific conclusions and formulate recommendations for any necessary further action by Government, FAO and/or other parties

[15] See: http://www.fao.org/partnerships/partners-home/en/

to ensure sustainable development, including any need for follow-up or up-scaling action. The evaluation will draw attention to specific good practices and lessons to be learned as they are of interest to other similar activities. Any proposal for further assistance should include specification of major objectives and outputs and indicative inputs required.

Evaluation methodology

Approach and tools

The evaluation will adhere to the UNEG Norms & Standards.[16]

The evaluation will adopt a consultative and transparent approach with internal and external stakeholders throughout the evaluation process. Triangulation of evidence and information gathered will underpin its validation and analysis, as well as support conclusions and recommendations.

The evaluation will make use of the following methods and tools:

- Evaluation of data bases being utilised and their adequacy and appropriateness for analysis undertaken to provide evidence;
- Review of models used and analyses undertaken: their adequacy effectiveness and robustness;
- In particular models used for econometric analyses;
- Models for cost and benefit analyses;
    - Model and approaches for risk managing and simulation;
    - Models and methods for calculating mitigation potential;
- review of existing reports, papers, briefs and articles;
- semi-structured interviews with key informants, stakeholders and participants, supported by check lists and/or interview protocols;
- surveys and questionnaires.

Particular attention will be devoted to ensure that women and other under-privileged groups will be consulted in adequate manner. Insofar as possible and appropriate, interaction will also take place with non-participants to canvass their opinions. The Sustainable Livelihoods Framework;[17] the Strengths, Weaknesses, Opportunities and Threats (SWOT) framework can be used for assessment of project results.[18]

Within resources available, and after consultation with OED and project management, the team will independently decide which locations, outputs and outcomes to assess in detail.

The evaluation will include the following activities:

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[16] United Nations Evaluation Group, http://www.uneval.org/normsandstandards

[17] The Sustainable Livelihoods Framework identifies five different capitals (human, social, natural, financial, and physical), each including different assets. It helps in improving understanding of livelihoods, in particular of the poor. For more information, among others: http://www.livelihoods.org/info/guidance_sheets_pdfs/section2.pdf

[18] SWOT is a widely used strategic planning tool, useful also in the assessment of development interventions, to canvass their strengths and weaknesses, as well as future perspectives. It is particularly used in focus groups, but it can be adapted to individual interviews as well.

A desk review of the project documents, outputs, monitoring reports (e.g. project inception report, core team reports and reports from other relevant meetings; workshop reports and retreat reports, project implementation reports (PIR); progress reports), briefs, publications, working papers and articles, as well as presentations given at important conferences and workshops and other internal documents including methodologies and tools used for data collection;

A review of specific products including the content of the project website, annual work plans, empirical strategy summary and other materials and reports;

In the visited countries, Malawi and Zambia, interviews with staff and national institutions and national/regional counterparts involved in project implementation including the national technical coordinator, lead research institutions in the countries, and lead consultants in charge of undertaking core project activities such as crop budget estimates and institutional data collection, institutions and policy mapping, focal points for UNFCCC negotiations at country level, managers, the FAO Representations, the Lead Technical Unit and Budget Holder, task force members of other involved technical units of FAO;

The team will also meet other actors who are active working on the project, notably counterpart institutions and service providers and partner projects to assess actual and potential areas of collaboration and partnership;

Stakeholders and consultation process

The briefings and debriefing will include the Government, the partners, the FAO Representation and other relevant actors.

The evaluation team will discuss in detail with the key stakeholders of the project and will take into account their perspectives and opinions. Key stakeholders will include:

Project Task Force members;

Government representatives from the partner organizations;

the resource partner;

FAO Representatives in the participating countries;

Technical coordinators in partner countries;

Consultants in charge of key activities for the project including the senior economic modelling and analysis experts, the cost benefit analysis consultants, the senior policy expert and the investment specialist;

Research institutes in partner countries: including Bunda College in Malawi, University of Zambia, and Thai Nguyen University of Agriculture and Forestry in Vietnam, NOMAFSI; and

Participants in communities, including farmers, processors, exporters, organizations and cooperatives, service providers, etc.

The evaluation team will maintain close liaison with: the FAO Office of Evaluation, the Project Task Force members and Project staff at headquarters, regional, sub-regional or country level. Although the mission is free to discuss with the authorities concerned anything relevant to its assignment, it is not authorized to make any commitment on behalf of the Government, the donor or FAO.

The team will present its preliminary findings, conclusions and recommendations to the project stakeholders in the visited country/ies and insofar as possible, in the relevant FAO

Decentralized Office and in HQ, to obtain their feedback at the end of the data-gathering phase.

The draft ToR will be circulated among key stakeholders for comments before finalisation; suggestions will be incorporated as deemed appropriate by OED. The draft evaluation report will also be circulated among key stakeholders for comments before finalisation; suggestions will be incorporated as deemed appropriate by the evaluation team.

Roles and responsibilities

FAO Budget Holder (BH), the Lead Technical Officer (LTO) and the Project Task Force (PTF) of the project to be evaluated are responsible for initiating the evaluation process, drafting the first version of the Terms of Reference, and supporting the evaluation team during its work. They are required to participate in meetings with the team, make available information and documentation as necessary, and comment on the draft final terms of reference and report. Involvement of different members of the project Task Force will depend on respective roles and participation in the project.

The BH is also responsible for leading and coordinating the preparation of the FAO Management Response and the Follow-up Report to the evaluation, fully supported in this task by the LTO and PTF. OED guidelines for the Management Response and the Follow-up Report provide necessary details on this process.

FAO Office of Evaluation assists the BH and LTO in drafting the ToR, in the identification of the consultants and in the organization of the team's work; it is responsible for the finalization of the ToR and of the team composition;[19] it shall brief the evaluation team on the evaluation methodology and process and will review the final draft report for Quality Assurance purposes in terms of presentation, compliance with the ToR and timely delivery, quality, clarity and soundness of evidence provided and of the analysis supporting conclusions and recommendations.

The Office of Evaluation has also a responsibility in following up with the BH for the timely preparation of the Management Response and the Follow-up to the MR.

The Evaluation Team is responsible for conducting the evaluation, applying the methodology as appropriate and for producing the evaluation report. All team members, including the Team Leader, will participate in briefing and debriefing meetings, discussions, field visits, and will contribute to the evaluation with written inputs for the final draft and final report.

The Team Leader guides and coordinates the team members in their specific work, discusses their findings, conclusions and recommendations and prepares the final draft and the final report, consolidating the inputs from the team members with his/her own.

The Evaluation team will be free to expand the scope, criteria, questions and issues listed above, as well as develop its own evaluation tools and framework, within time and resources available.

[19] The responsibility for the administrative procedures for recruitment of the team, will be decided on a case-by-case basis.

The team is fully responsible for its report which may not reflect the views of the Government or of FAO. An evaluation report is not subject to technical clearance by FAO although OED is responsible for Quality Assurance of all evaluation reports.

As a contribution to the OED Knowledge Management System:

- the Team Leader will be responsible for completing the OED quantitative project performance questionnaire, to be delivered at the same time with the final evaluation report;
- OED will ask all team members to complete an anonymous and confidential questionnaire to get their feedback on the evaluation process.

For further details related to the tasks of the Team leader and team members, please refer to template TORs provided in annex.

Evaluation team

Mission members will have had no previous direct involvement in the formulation, implementation or backstopping of the project. All will sign the Declaration of Interest form of the FAO Office of Evaluation.

The evaluation team, to consist of two persons, a Team Leader and Team Member, will comprise the best available mix of skills that are required to assess the project, and as a whole, will have expertise in all the following subject matters:

- Agricultural economics and climate change adaptation;
- Evaluation of research and policy-oriented projects in the technical areas above;
- Governance, political, economic and institutional issues associated with food security, agriculture, natural resources and climate change
- Conduct of evaluations.

All team members will have a University Degree and a minimum of 15 years of professional experience, or equivalent level of competence, in their respective areas of specialization. Insofar as possible, all will be fluent in English.

Furthermore, to the extent possible, the team will be balanced in terms of geographical and gender representation to ensure diversity and complementarity of perspectives.

Evaluation deliverables

The evaluation report will illustrate the evidence found that responds to the evaluation issues, questions and criteria listed in the ToR. It will include an executive summary. Supporting data and analysis should be annexed to the report when considered important to complement the main report.

The recommendations will be addressed to the different stakeholders and prioritized: they will be evidence-based, relevant, focused, clearly formulated and actionable.

The evaluation team will agree on the outline of the report early in the evaluation process, based on the template provided in Annex I of this ToR. The report will be prepared in English, with numbered paragraphs, following OED template for report writing. Translations in other languages of the Organization, if required, will be FAO's responsibility.

The team leader bears responsibility for submitting the final draft report to FAO within 3 weeks from the conclusion of the mission. Within 2 additional weeks, FAO and a select group of external stakeholders (to be decided) will submit to the team its comments and suggestions that the team will include as appropriate in the final report.

Annexes to the evaluation report will include, though not limited to, the following as relevant:

Terms of reference for the evaluation;
Profile of team members;
List of documents reviewed;
List of institutions and stakeholders interviewed by the evaluation team;
List of project outputs;
Evaluation tools.

Evaluation timetable

The evaluation is expected to take place during January-March 2014. The country visit phase is expected to last one to two weeks. The timetable in the box below shows a tentative programme of travel and work for the evaluation team. It will be finalised upon the recruitment of the evaluation team.

i. Tentative timetable of the evaluation

Task	Dates	Duration	Responsibility
ToR development and finalization	October-November	5-6 weeks	PTF and OED
Team identification and recruitment	November-December	3 weeks	OED
Mission organization	December	1 week	OED
Reading background documentation	Mid-January	2 days	Evaluation Team (ET)
Briefing	Mid-January	1 day	OED
Travel	Mid-January	1 day	ET
Interviews in HQ, analysis of data, and interviews with Viet Nam stakeholders (via teleconference) and with international partners	Mid-January	4 days	ET
Travel to Malawi	Late January	1 day	ET
Meetings with stakeholder in Malawi	Late January	3 days	ET
Travel to Zambia	Late January	1 day	ET
Meetings with stakeholder in Zambia	Early February	3 days	ET
Travel to Rome	Early February	1 day	ET
Preparation and presentation of debriefing on draft findings to PTF	Early February	2 days	ET
Preparation of first draft of report	Mid-February	Two weeks	ET
Delivery of comments from OED to Team Leader (TL)	Mid-February	Within 7 Days	OED
Preparation of final draft report by TL and circulation to project stakeholders by OED	Mid-February	Within 2 days	ET

Comments from project stakeholders and selected country stakeholders	Late February	Two weeks	PTF and stakeholders
Finalization of report and its circulation	Late February	Within 2 days	ET and OED
OED sends request for Management Response to Budget Holder	Late February	Within 1 day	OED
BH submits Management Response to OED	Early March	Within 2 weeks	BH

Annex 3. FAO Strategic Objectives, Results and core functions, 2010-2019

Box 1. FAO Members Global Goals

Global Goals 2010-13	Global Goals 2014-17
a) Reduction of the absolute number of people suffering from hunger, progressively ensuring a world in which all people at all times have sufficient safe and nutritious food that meets their dietary needs and food preferences for an active and healthy life;	Eradication of hunger, food insecurity and malnutrition, progressively ensuring a world in which people at all times have sufficient safe and nutritious food that meets their dietary needs and food preferences for an active and healthy life;
b) Elimination of poverty and the driving forward of economic and social progress for all with increased food production, enhanced rural development and sustainable livelihoods;	Elimination of poverty and the driving forward of economic and social progress for all, with increased food production, enhanced rural development and sustainable livelihoods;
c) Sustainable management and utilisation of natural resources, including land, water, air, climate and genetic resources, for the benefit of present and future generations.	Sustainable management and utilization of natural resources, including land, water, air, climate and genetic resources for the benefit of present and future generations.

Box 2. FAO Strategic Objectives and Organizational Results 2010-13

Code	Title	Lead Unit
A	Sustainable intensification of crop production	AG
A01	Policies and strategies on sustainable crop production intensification and diversification at national and regional levels	AGP
A02	Risks from outbreaks of transboundary plant pests and diseases are sustainably reduced at national, regional and global levels	AGP
A03	Risks from pesticides are sustainably reduced at national, regional and global levels	AGP
A04	Effective policies and enabled capacities for a better management of plant genetic resources for food and agriculture (PGRFA) including seed systems at the national and regional levels	AGP
B	Increased sustainable livestock production	AG
B01	The livestock sector effectively and efficiently contributes to food security, poverty alleviation and economic development	AGA
B02	Reduced animal disease and associated human health risks	AGA
B03	Better management of natural resources, including animal genetic resources, in livestock production	AGA
B04	Policy and practice for guiding the livestock sector are based on timely and reliable information	AGA
C	Sustainable management and use of fisheries and aquaculture resources	FI
C01	Members and other stakeholders have improved formulation of policies and standards that facilitate the implementation of the Code of Conduct for Responsible Fisheries (CCRF) and other international instruments, as well as response to emerging issues	FI

C02	Governance of fisheries and aquaculture has improved through the establishment or strengthening of national and regional institutions, including RFBs	FIE
C03	More effective management of marine and inland capture fisheries by FAO Members and other stakeholders has contributed to the improved state of fisheries resources, ecosystems and their sustainable use	FIM
C04	Members and other stakeholders have benefited from increased production of fish and fish products from sustainable expansion and intensification of aquaculture	FIM
C05	Operation of fisheries, including the use of vessels and fishing gear, is made safer, more technically and socio-economically efficient, environmentally-friendly and compliant with rules at all levels	FII
C06	Members and other stakeholders have achieved more responsible post-harvest utilization and trade of fisheries and aquaculture products, including more predictable and harmonized market access requirements	FII
D	Improved quality and safety of food at all stages of the food chain	AG
D01	New and revised internationally agreed standards and recommendations for food safety and quality that serve as the reference for international harmonization	AGN
D02	Institutional, policy and legal frameworks for food safety/quality management that support an integrated food chain approach	AGN
D03	National/regional authorities are effectively designing and implementing programmes of food safety and quality management and control, according to international norms	AGN
D04	Countries establish effective programmes to promote improved adherence of food producers/businesses to international recommendations on good practices in food safety and quality at all stages of the food chain, and conformity with market requirements	AGN
E	Sustainable management of forests and trees	FO
E01	Policy and practice affecting forests and forestry are based on timely and reliable information	FOM
E02	Policy and practice affecting forests and forestry are reinforced by international cooperation and debate	FOE
E03	Institutions governing forests are strengthened and decision-making improved, including involvement of forest stakeholders in the development of forest policies and legislation, thereby enhancing an enabling environment for investment in forestry and forest industries. Forestry is better integrated into national development plans and processes, considering interfaces between forests and other land uses	FOE
E04	Sustainable management of forests and trees is more broadly adopted, leading to reductions in deforestation and forest degradation and increased contributions of forests and trees to improve livelihoods and to contribute to climate change mitigation and adaptation	FOM
E05	Social and economic values and livelihood benefits of forests and trees are enhanced, and markets for forest products and services contribute to making forestry a more economically-viable land-use option	FOE
E06	Environmental values of forests, trees outside forests and forestry are better realized; strategies for conservation of forest biodiversity and genetic resources, climate change mitigation and adaptation, rehabilitation of degraded lands, and water and wildlife management are effectively implemented	FOM
F	Sustainable management of land, water and genetic resources and improved responses to global environmental challenges affecting food and agriculture	NR
F01	Countries promoting and developing sustainable land management	NRL
F02	Countries address water scarcity in agriculture and strengthen their capacities to improve water productivity of agricultural systems at national and river-basin levels including	NRL

	transboundary water systems	
F03	Policies and programmes are strengthened at national, regional and international levels to ensure the conservation and sustainable use of biological diversity for food and agriculture and the equitable sharing of benefits arising from the use of genetic resources	NRD
F04	An international framework is developed and countries' capacities are reinforced for responsible governance of access to, and secure and equitable tenure of land and its interface with other natural resources, with particular emphasis on its contribution to rural development	NRC
F05	Countries have strengthened capacities to address emerging environmental challenges, such as climate change and bioenergy	NRC
F06	Improved access to and sharing of knowledge for natural resource management	OEK
G	Enabling environment for markets to improve livelihoods and rural development	ES
G01	Appropriate analysis, policies and services enable small producers to improve competitiveness, diversify into new enterprises, increase value addition and meet market requirements	
G02	Rural employment creation, access to land and income diversification are integrated into agricultural and rural development policies, programmes and partnerships	ESW
G03	National and regional policies, regulations and institutions enhance the developmental and poverty reduction impacts of agribusiness and agro-industries	
G04	Countries have increased awareness of and capacity to analyse developments in international agricultural markets, trade policies and trade rules to identify trade opportunities and to formulate appropriate and effective pro-poor trade policies and strategies	EST
H	Improved food security and better nutrition	ES
H01	Countries and other stakeholders have strengthened capacity to formulate and implement coherent policies and programmes that address the root causes of hunger, food insecurity and malnutrition	ESA
H02	Member countries and other stakeholders strengthen food security governance through the triple-track approach and the implementation of the Voluntary Guidelines to Support the Progressive Realization of the Right to Adequate Food in the Context of National Food Security	ESA
H03	Strengthened capacity of member countries and other stakeholders to address specific nutrition concerns in food and agriculture	AGN
H04	Strengthened capacity of member countries and other stakeholders to generate, manage, analyse and access data and statistics for improved food security and better nutrition	ESS
H05	Member countries and other stakeholders have better access to FAO analysis and information products and services on food security, agriculture and nutrition, and strengthened own capacity to exchange knowledge	ESA
I	Improved preparedness for, and effective response to, food and agricultural threats and emergencies	TC
I01	Countries' vulnerability to crisis, threats and emergencies is reduced through better preparedness and integration of risk prevention and mitigation into policies, programmes and interventions	TCE
I02	Countries and partners respond more effectively to crises and emergencies with food and agriculture-related interventions	TCE
I03	Countries and partners have improved transition and linkages between emergency, rehabilitation and development	TCE

K	Gender equity in access to resources, goods, services and decision-making in the rural areas	ES
K01	Rural gender equality is incorporated into UN policies and joint programmes for food security, agriculture and rural development	ESW
K02	Governments develop enhanced capacities to incorporate gender and social equality issues in agriculture, food security and rural development programmes, projects and policies using sex-disaggregated statistics, other relevant information and resources	ESW
K03	Governments are formulating gender-sensitive, inclusive and participatory policies in agriculture and rural development	ESW
K04	FAO management and staff have demonstrated commitment and capacity to address gender dimensions in their work	ESW
L	Increased and more effective public and private investment in agriculture and rural development	TC
L01	Greater inclusion of food and sustainable agriculture and rural development investment strategies and policies into national and regional development plans and frameworks	TCI
L02	Improved public and private sector organisations' capacity to plan, implement and enhance the sustainability of food and agriculture and rural development investment operations	TCI
L03	Quality assured public/private sector investment programmes, in line with national priorities and requirements, developed and financed	TCI

Box 3. FAO Strategic Objectives 2014-17

1	Contribute to the eradication of hunger, food insecurity and malnutrition
2	Increase and improve provision of goods and services from agriculture, forestry and fisheries in a sustainable manner
3	Reduce rural poverty
4	Enable more inclusive and efficient agricultural and food systems at local, national and international levels
5	Increase the resilience of livelihoods to threats and crises
Objective 6	Technical quality, knowledge and services

Box 4. FAO Functional Objectives 2014-17

8. Outreach
9. Information Technology
10. FAO Governance, oversight and direction
11. Efficient and effective administration

Box 5. FAO Core Functions 2010-13 and 2014-17

Core functions 2010-13		**Core functions 2014-17**	
a	Monitoring and assessment of long-term and medium-term trends and perspectives		

b	Assembly and provision of information, knowledge and statistics	2	Assemble, analyze, monitor and improve access to data and information, in areas related to FAO´s mandate
c	Development of international instruments, norms and standards	1	Facilitate and support countries in the development and implementation of normative and standard-setting instruments, such as international agreements, codes of conduct, technical standards and others
d	Policy and strategy options and advice	3	Facilitate, promote and support policy dialogue at global, regional and country levels
		4	Advise and support capacity development at country and regional level to prepare, implement, monitor and evaluate evidence-based policies, investments and programmes
e	Technical support to promote technology transfer and build capacity	5	Advise and support activities that assemble, disseminate and improve the uptake of knowledge, technologies and good practices in the areas of FAO's mandate
f	Advocacy and communication	7	Advocate and communicate at national, regional and global levels, in areas of FAO's mandate
g	Inter-disciplinarity and innovation		
h	Partnerships and alliances	6	Facilitate partnerships for food security and nutrition, agriculture and rural development, between governments, development partners, civil society and the private sector

Box 6. FAO cross-cutting themes 2014-17

Gender
Governance

Annex 4. List of institutions and stakeholders met during the evaluation process

Name	Organization	Position	Roles/Responsibility within the project
VIET NAM			
Ms Pham Thi Sen	NOMAFSI	Head of Science and Int'l cooperation	Leading NOMAFSI team
Ms Nguyen Thanh Hai	NOMAFSI	Researcher	CBA survey coordination
Mr Tran Nam Binh	PeaPros consulting Ltd	Chairman	Leading the team for Institutional analysis
Mr Nghiem Ba Hung	PeaPros consulting Ltd	Director	Expert for Institutional analysis
Ms Pham Ngoc Linh	MCG consulting Ltd	Manager	Leading the team for Value Chain Analysis
Mr Ho Ngoc Son	Thai Nguyen Agr Forestry University	Manager	Coordinating MSc program supported by the CSA project
Ms Kim Soojin	FAOVN	Officer	FAOVN focal point
Mr. Nguyen Van Linh	CSA project	Consultant	Tech. support
Mr. Le Dai Nghia	CSA project	Coordinator	Tech. & admin support
Ms Bui My Binh	MARD	ICD	Desk Officer for the CSA project
Mr Sebastian Leocadio	SEA CCAFS	Regional leader	Partner
ZAMBIA			
Misael Kokwe	FAO		CSA Technical Coordinator
Mr Gregory Chanda	AFAOR (Programme)		FAO
Dr George Okech	FAOR		FAO
Mr Morton Mwanza	Ministry of Agriculture	CSA National Project Coordinator	Focal Point
Mr Excelent Hachileka	UNDP	Climate Change Advisor	
Mr Eric Chipeta	UNDP	Energy and Environment Programme Analyst	
Mr Mwepya Shitima	Natural Resources &Environment Directorate -	Ministry of NR & Environment	Focal point
Ms Terhi Paikkala	Gender Expert FAO	FAO	
Mr Collins Nkatiko	Conservation Farming Unit	–Director of Operations	

Ms Angela Kabuswe	Climate Change Secretariat	Climate Change Expert	
Mr Noah Zimba	Zambia National Climate Change Network -	Chairperson	
Ms Monica Chundama	Zambia National Climate Change Network –	Vice Chairperson	
Mr Martin Sishekano	PPCR Advisor	Climate Change Secretariat	
Dr Mick Mwala	Dean School of Agriculture	University of Zambia	
Dr Thomson Kalinda	School of Agricultural Economics	University of Zambia	Coordinator for University activity- Zambia
Ms Mulako Kabisa	MSc Student - UNZA (CSA Scholarship)	University of Zambia	Funded Msc Student
Mr Dingiswayo Banda	Zambia National Statistics	CSA Consultant –	Cost Benefit Analysis of CSA practices
Mr Achim Nyirenda	Senior Agricultural Officer-	Chibombo District	
Mr Kashenka	Block Supervisor –	Kembe Block	
Mr Nzhila	Lead Farmer –	Kembe Camp	
MALAWI			
George Phiri	FAO		Project Coordinator
Mr. Charles Mwalabu,	Ministry of Agriculture	Chief Irrigation Officer	
Mr. Mark Ndipita	MoAFS	Department of Agricultural Extension Services	
Florence Rolle	FAOR and AFAOR		
Dr. Luhanga	MOAFS	PS	
Mr. Austin Tibu	MoAFS	Department of Land Resources and Conservation	Focal Point for CSA project,
Ms. Jenny Brown	EU/EC	Programme Manager Agric. & Climate Change,	

Dr. Godfrey Ching'oma	MoAFS	Director, Dept. of Crops,	
Mr. Roman Malumelo	Donor Group for Agriculture and Food Security	Coordinator	
Alfred Kambwiri	CISANET	Programme Manager Climate and Agriculture Budget Analysis Themes	
Dr. Aloysius Kamperewera	Enviornmental Affairs	Director	
Ms Ivy Ligowe	Chitedze Research Station	Agric Research Scientist	
Ms Dalitso Kafuwa	World Bank		
Mr. Jollam Banda	Min of Dev. Planning & Cooperation	Dep. Director	
Mr. Jacob Nyirongo	Farmers Union of Malawi	Director of Policy and Institutional Affairs,	
Mr. Frazer Mataya	NASFAM	Farm Services Coordinator	
Mr. Tsoka			Replacing Godfrey Ching'oma)
Mr. Austin Tibu	MoAFS	Department of Land Resources and Conservation	Focal Point for CSA project,
Dr. Wilfred Kadewa	NRM,	Dep. Head of Dept.,	Coordinator of Students Programme at Bunda,
Yasinta Ganiza	Ministry of Environment and Climate Change Management	Environmental Affairs Department,	
Dr. Blessings Chinsinga	Institutional Mapping and Policy Analysis		Consultant
Dr. Abiba Longwe	Chitedze Research Station		National Consultant
Mr. Readwell Musopole,	ASWAp		
Mr. John Mussa	MoAFS	Director , Department of Land Resources and Conservation	CSA Project Focal Point

Leslie Lipper	FAO	ESA	
Andrea Cattaneo	FAO	ESA	Project manager
Ashwin Bhouraskar	FAO	OED	Evaluation Manager
Romina Cavatassi	FAO	ESA	Project Coordinator, ESA
Alessandro Spairani	FAO	ESA	Project Officer, ESA
Wendy Mann	FAO	Biodiversity International	Technical & Analytical support on Climate smart Agriculture and Institutional analysis
Aslihan Arslan	FAO	ESA	Natural Resource Economist
Solomon Asfaw	FAO	ESA	Economist
Giacomo Branca	University of Viterbo	Consultant	Cost Benefit analysis and on the surveys
Reuben Sessa	FAO	NR Officer (NRC)	
Yao Xiangjun	FAO	Director, NRC	
Takis Karfakis	FAO		Economist (CSA),
Adriana Paoloantonio	FAO	ESA	CSA team member working on modelling in Malawi
Prof. Joshua Graf Zivin,	University of California at San Diego	Professor, Development of farm-level model and simulation	Consultant
Dr. Nancy McCarthy	Lead Analytics, President		Consultant Leading modelling, simulations and empirical analysis
Mr. Jon Pycroft		Development of CGE model	Consultant

Annex 5. EPIC Meeting and Events, and List of Outputs

No.	Meeting type	Dates	Location	Participants (w/m)	Partners	Website
EPIC-organized						
1	Inception workshop	10-12 July 2012	Salima, Malawi	45 (10/35)	MoAFS	http://www.fao.org/climatechange/epic/events/malworkshopdoc/en/
2	Inception workshop	17-18 Dec 2012	Hanoi, Viet Nam	57 (27/30)	MARD	http://www.fao.org/climatechange/epic/events/vnworkshopdoc/en/
3	Inception workshop	9-11 Jan 2013	Lusaka, Zambia	27 (5/22)	MAL	http://www.fao.org/climatechange/epic/events/zamworkshopdoc/en/
4	Technical consultation	21-24 May 2013	Rome, Italy	39 (17/22)	CCAFS/Uni Aberdeen	http://www.fao.org/climatechange/epic/events/consultation/en/
5	Enumerator training for data collection	3-9 July 2013	Lilongwe, Malawi	7	FAO	
6	Enumerator training for data collection	9-15 July 2013	Lusaka, Zambia	9	FAO	
7	Policy harmonization	14-Aug-13	Lusaka, Zambia	22 (4/18)	MAL/MLNREP	http://www.fao.org/climatechange/epic/events/policydialogues/en/
8	Policy harmonization	20-Aug-13	Lilongwe, Malawi	20 (7/13)	MoAFS/MoECCM	http://www.fao.org/climatechange/epic/events/policydialogues/en/
9	Participatory scenario building	14-16 Oct 2013	Lusaka, Zambia	29 (8/21)	CCAFS/MAL	http://www.fao.org/climatechange/epic/events/scenarios/en/

10	Participatory scenario building	28-30 Oct2013	Salima, Malawi	21 (5/16)	CCAFS/MoAFS	http://www.fao.org/climatechange/epic/events/scenarios/en/
11	Participatory scenario building	5-7 Nov 2013	Ha Long, Viet Nam	60	CCAFS/UNEP/ NOMAFSI	
12	Ex-Act training (Mitigation)	3-4 Feb 2014	Lusaka, Zambia	30	FAO/MAL	
13	Ex-Act training (Mitigation)	10-11 Feb 2014	Lilongwe, Malawi	30	FAO/MoAFS	
14	Ex-Act training (Mitigation)	20-21 Mar 2014	Hanoi, Viet Nam	30	FAO/MARD	
15	Participatory scenario building	20 -21 May 2014	Lusaka, Zambia		CCAFS/MAL	
16	Participatory scenario building	8-9 May 2014	Salima, Malawi		CCAFS/MoAFS	
17	Participatory scenario building	8-10 May 2014	Ha Long, Viet Nam		CCAFS/NOMAFSI	
18	Core team meeting	04-Oct-13	Hanoi, Viet Nam			
19	Core team meeting	23-Aug-13	Lilongwe, Malawi			
20	Core team meeting	16-Jan-14	Lilongwe, Malawi			
21	Core team meeting	23-Sep-13	Lusaka, Zambia			
22	Electronic forum	21 Mar- 10 Apr 2014	online			http://www.fao.org/fsnforum/forum/discussions/epic
Attended by EPIC staff						
1	UNFCCC COP20	1-12 Dec 2014	Lima, Peru			http://www.unfccc.int

2	6th International Conference on Climate Change	27-28 June 2014	Reykjavik, Iceland			
3	UNFCCC SBSTA 40/SBI40	4 - 15 Jun 2014	Bonn, Germany			http://www.unfccc.int
4	Building Resilience for Food and Nutrition security	15-17 May 2014	Addis Ababa, Ethiopia		IFPRI	www.2020resilience.ifpri.info/
5	First African Congress on Conservation Agriculture	18-21 Mar 2014	Lusaka, Zambia			
6	Regional workshop on African Agriculture in a Changing Climate: Enhancing the up-take of Climate Smart Agriculture	12-14 Feb 2014	Arusha, Tanzania			
7	3rd Global Conference on Agriculture, Food Security and Climate Change	3-5 Dec 2013	Johannesburg, South Africa			http://www.slideshare.net/FAOoftheUN/cattaneo-afcc-jburgdec2013
8	UNFCCC COP19 FAO side event	11-22 November 2013	Warsaw			http://www.fao.org/climatechange/unfccc-process/cop19/en/
9	UNFCCC COP19 ICRAF side event	11-22 Nov 2013	Warsaw			
10	UNFCCC COP19 IFOAM side event	11-22 Nov 2013	Warsaw			
11	UNFCCC SBSTA 38 FAO side event	3-14 June 2013	Bonn, Germany			http://www.fao.org/climatechange/unfccc-process/83119/en/

12	17th Conference of the International Consortium on Applied Bioeconomy Research (ICABR) "INNOVATION AND POLICY FOR THE BIOECONOMY"	18-21 June 2013	Ravello (Amalfi Coast), Italy			http://www.slideshare.net/FAOoftheUN/climate-variability-adaptation-strategy-and-food-security-in-malawi
13	Food Security Futures Conference	11-12 April 2013	Dublin, Ireland			http://www.pim.cgiar.org/food-security-futures-conference/
14	Climate-Smart Agriculture: Global science conference	20-22 March 2013	University of California, Davis			http://climatesmart.ucdavis.edu/index.html
15	UNFCCC COP18 FAO side event	26 Nov - 7 Dec 2012	Doha			http://www.fao.org/climatechange/unfccc-process/cop18/en/
16	UNFCCC SBSTA 36 FAO side event	14-25 May 2012	Bonn, Germany			http://www.fao.org/climatechange/unfccc-process/77031/en/
17	2nd Global Conference on Agriculture, Food Security and Climate Change - Hunger for Action	3-7 Sept 2012	Hanoi, Viet Nam			http://www.afcconference.com/
18	28th International Conference of Agricultural Economists - The Global Bio-economy	18-24 Aug 2012	Foz do Iguaçu, Brazil			http://www.itarget.com.br/newclients/sober.org.br/icae_2012/?op=paginas&tipo=secao&secao=22&pagina=24
19	Meridian Institute		Paris			

20	Meridian Institute	18-19 Oct 2012	Rome			

EPIC List of Outputs

N.	Type	Title	Date	URL
1	Working paper	Climate-Smart Agriculture? A review of current practice of agroforestry and conservation agriculture in Malawi and Zambia	Oct-13	http://www.fao.org/docrep/019/ar715e/ar715e.pdf
2	Working paper	Adoption and intensity of adoption of conservation farming practices in Zambia	Apr-13	http://www.fao.org/docrep/017/aq288e/aq288e.pdf
3	Working paper	Developing a Climate-Smart Agriculture strategy at the country level: lessons from recent experience	Aug-12	http://www.fao.org/docrep/016/ap401e/ap401e.pdf
4	Workshop report	Inception Workshop Report Malawi	Jul-12	http://www.fao.org/fileadmin/user_upload/epic/docs/workshops/Malawi/Malawi_CSA_Workshop_2012_Report_fin.pdf
5	Workshop report	Inception Workshop Report Vietnam	Dec-12	http://www.fao.org/fileadmin/user_upload/epic/docs/workshops/Vietnam/CSA-Inception_Workshop_Report_final.pdf
6	Workshop report	Inception Workshop Report Zambia	Jan-13	http://www.fao.org/fileadmin/user_upload/epic/docs/workshops/Zambia/Documents/Zambia_CSA_Workshop_2013_Report.pdf
7	Workshop report	Technical consultation report	May-13	http://www.fao.org/docrep/018/ar051e/ar051e.pdf
8	Workshop report	Policy harmonization in Zambia	Aug-13	http://www.fao.org/docrep/018/aq666e/aq666e.pdf

9	Workshop report	Policy harmonization in Malawi	Aug-13	http://www.fao.org/docrep/018/aq668e/aq668e.pdf
10	Communique	Communiqué on Policy Harmonization in Zambia	Aug-13	http://www.fao.org/docrep/018/aq665e/aq665e.pdf
11	Communique	Communiqué on Policy Harmonization in Malawi	Aug-13	http://www.fao.org/docrep/018/aq667e/aq667e.pdf
12	Workshop report	Climate change and agriculture scenarios for Malawi	Oct-13	http://www.fao.org/docrep/019/i3566e/i3566e.pdf
13	Workshop report	Climate change and agriculture scenarios for Zambia	Oct-13	http://www.fao.org/docrep/019/i3565e/i3565e.pdf
14	Workshop report	Climate change and agriculture scenarios for Vietnam	Nov-13	http://www.fao.org/fsnforum/sites/default/files/files/99_EPIC/Scenarios%20workshop%20report%20II_FSN%20(2).pdf
15	Brief	Briefing note on agriculture at the UNFCCC	May-12	http://www.fao.org/climatechange/32439-0c9c6ae2d95a7600de3ba4181ae9c6191.pdf
16	Brief	Briefing note on agriculture at the UNFCCC	Nov-12	http://www.fao.org/fileadmin/user_upload/epic/docs/Briefs/EPIC_Briefing_note_for_Doha_Nov_2012.pdf
17	Brief	Briefing note on agriculture at the UNFCCC	Jun-13	http://www.fao.org/docrep/018/aq551e/aq551e.pdf
18	Brief	Briefing note on agriculture at the UNFCCC	Nov-13	http://www.fao.org/docrep/019/ar716e/ar716e.pdf
19	Brief	EMERGING EVIDENCE FROM MALAWI	May-13	http://www.fao.org/docrep/018/aq547e/aq547e.pdf

20	Brief	EMERGING EVIDENCE FROM Zambia	May-13	http://www.fao.org/docrep/018/aq550e/aq550e.pdf
21	Brief	EMERGING ISSUES FROM VIET NAM	May-13	http://www.fao.org/docrep/018/aq549e/aq549e.pdf
22	Newsletter	EPIC UPDATES	Oct-13	http://eepurl.com/F1PeD
23	Newsletter	EPIC UPDATES	Dec-13	http://eepurl.com/Jxbmb
24	Newsletter	EPIC UPDATES	Mar-14	http://eepurl.com/P_Qu9
25	Training manual	Training manual for frontline staff (draft)	Apr-14	
26	Video	EPIC Climate-Smart Agriculture Introductory video	Sep-13	https://www.youtube.com/watch?v=QmGDvpKzAeU
27	Video	Policy makers and researchers talk about the importance of CSA	Oct-13	https://www.youtube.com/watch?v=5kKpZbjtUIk
28	Project brief	Climate-Smart Agriculture	Mar-12	file:///C:/Users/Spairani/Downloads/EPIC_CSA%20Project%20Flyer%20(4).pdf

Annex 6. OED Project Scoring Matrix

OED project scoring matrix															
A. Background information															
Project Title:	CLIMATE SMART AGRICULTURE: CAPTURING THE SYNERGIES AMONG MITIGATION, ADAPTATION AND FOOD SECURITY IN MALAWI, VIETNAM AND ZAMBIA														
Project Symbol:															
Projec Start Date (EOD) (dd/mm/yy)															
Project NTE (at time of TORs) (dd/mm/yy)															
Project LTO															
Project Budget (DWH budget at time of TORs):	USD														
Type of Project:	TCD			Emergency											
Type of Evaluation:	Separate		Joint		Programme										
Timing of Evaluation:	Mid-Term X		Final		Ex-post										
Mission dates in the country (dd/mm/yy)	03/03/2014	14/03/2014		To:											
B. Assessment of the project - Questions and issues that require scoring are intended to read as "assess the degree to which...."															
Item No	Question/Issue	Item included			Scoring*										
		Yes	No	NA/NR	1	2	3	4	5	6	**TOTAL and AVERAGE**				
	I. Project Relevance to:										**5.3**				
1	***National/regional development priorities, programmes, needs of the population***														
2	***FAO Country Programming Framework***														
3	***FAO Global Goals, MDGs, Strategic Objectives and Organizational Results (list relevant and score)***														
3.1	National Priorities							x			4.0				
3.2	MDG1 MDG7									x	6.0				

3.3	FAO SO1, FAO SO2, FAO SO5									x	6.0
3.4											
4	***FAO Core Functions (list relevant and score)***										**6.0**
4.1	Facilitate and support countries in the development and implementation of normative and standard-setting instruments									x	6.0
4.2	Assemble, analyze, monitor and improve access to data and information									x	6.0
4.3	Facilitate, promote and support policy dialogue at global, regional and country levels									x	6.0
4.4	Advise and support capacity development at country and regional level to prepare, implement, monitor and evaluate evidence-based policies, investments and programmes									x	6.0
5	***Clarity, robustness and realism of the Theory of Change***								**x**		**5.0**
6	***Quality and realism of project design***										**5.0**
6.1	*Quality of the Logical Framework - validity of indicators, assumptions and risks*							x			4.0
6.2	*Approach and methodology - stakeholder and beneficiaries identification and analysis*								x		5.0
6.3	*Duration*								x		5.0
6.4	*Institutional set-up and management arrangements*									x	6.0
	II. Effectiveness of outputs and outcomes										**4.1**
7	***Outputs***										**3.3**
7.1	*Extent to which the expected outputs have been produced*						x				3.0
7.2	*Quality of produced outputs*								x		5.0
7.3	*Timeliness of produced outputs*					x					2.0
8	***Outcomes***										**4.0**
8.1	*Actual or potential achievement of outcomes*							x			4.0
9	***Feed-back loop for normative - knowledge products***										**5.0**
9.1	*Use by the project*								x		5.0
9.2	*Actual or potential contribution*								x		5.0
	III. Efficiency and Effectiveness of Project Implementation Process										**5.0**
10	***Management and implementation***										**4.4**
10	*Quality, realism and focus of workplan*								x		5.0
10	*Assessment of delivery, causes and consequences of delays and of any remedial measure taken*								x		5.0
10	*Monitoring and feed-back loop into improvement management and operations*								x		5.0

10	*Staff management*								x		5.0
11	*Development and implementation of an exit strategy*					x					2.0
11	***Institutional set-up***										**4.7**
11	*Admin. and technical support by FAO HQ, regional, sub-reg. and country office*							x			4.0
11	*Institutional set-up, internal review processes, coordination and steering bodies*								x		5.0
11	*Input and support by the Government/s and resource partners*								x		5.0
12	***Assessment of financial resource management***										**6.0**
12	*Adequacy and realism of budget allocations to achieve intended results*									x	6.0
12	*Adequacy and realism of Budget Revisions in matching implem. needs and prj objectives*									x	6.0
12	*Rate of delivery and budget balance at the time of the evaluation and in relation to work-plans*									x	6.0
	IV. Analysis of the application of the UN common country programming principles										**4.7**
13	***Gender equality***										**3.7**
13	*Extent to which gender issues were reflected in prj objectives, design and identif. of beneficiaries*						x				3.0
13	*Extent to which gender issues were taken into account in project implementation and management*								x		5.0
13	*Extent to which gender relations and equality are likely to be affected by the initiative*						x				3.0
14	***Extent and quality of Project/Programme Work on Capacity Development at***										**5.0**
14	*individual*								x		5.0
14	*organizational/institutional*									x	6.0
14	*enabling environment*							x			4.0
14	***Analysis of the adoption of the Human-Rights Based Approach***								x		**5.0**
15	***Design, implementation and effects on results and sustainability of partnerships and alliances***								x		**5.0**
16	***Analysis of how environmental impacts were taken into consideration and addressed***								x		**5.0**
17	***Extent of compliance with the Humanitarian Charter and Minimum Standards (emergency projects)***				n/a	n/a	n/a	n/a	n/a	n/a	n/a
	V. Impact										**4.3**
18	***Actual/potential impact on people***						x				3.0
19	***Actual/potential impact on institutions***								x		5.0

20	***Contribution to FAO SOs and Organizational Outcomes***							x			4.0
21	***Contribution to FAO Core Functions***								x		5.0
	VI. Sustainability										**3.8**
22	***Technical, economic and social***						x	x			3.5
23	***Institutional uptake and mainstreaming of newly acquired capacities***							x			4.0
24	***Diffusion among beneficiaries***							x			4.0
	VII. Overall project performance										
	VIII. Recommendations(not for scoring)										
List	6 months extension		Addressed to:								
	Involvement of private stakeholders										
	Policy model validation										
	Capacity building in -country strengthening										
	Single document summarizing models insights										
	Dissemination of deliverables from Universities and policy brief training										
	Integration of soil sequestration data										
	Visibility and communication plan										
	IX. Lessons learned (not for scoring)										
List	Entering the political arena in countries needs time										
	Attention needed for policy building at local level										
	More scope needed for engagement of the private sector										
	Needed clear planning of use for sustainability										
	Future replication or up scaling										
Scoring* 1 very poor; 2 poor; 3 inadequate; 4 adequate; 5 good; 6 excellent											