



 **B & M Development Consultants PLC**
Founding member of the Ethiopian Consultants Association

Support from DFID's Climate High Level Investment Programme to the CRGE Facility

Value for Money Report

Submitted to DFID and the CRGE Facility by LTS International Limited and
B&M Consultants PLC

18 August 2016



LTS International Ltd

Pentlands Science Park, Bush Loan
Penicuik, EH26 0PL
United Kingdom

Tel. +44 (0)131 440 5500

Fax. +44 (0)131 440 5501

Email. mail@ltsi.co.uk

Web. www.ltsi.co.uk

Twitter. @LTS_Int

Registered in Scotland Number 100833

Acronyms

CBA	Cost Benefit Analysis
CHIP	Climate High Level Investment Programme
CRGE	Climate Resilient Green Economy
DfID	Department for International Development
FTI	Fast Track Investment (a funding round of the Government's Climate Resilient Green Economy Financing Facility supported by DFID)
GoE	Government of Ethiopia
HABP	Household Asset Building Programme
IBEX	Integrated Budget and Expenditure System (GoE financial management software)
IPDC	Industrial Parks Development Corporation
MoANR	Ministry of Agriculture and Natural Resources
MEFCC	Ministry of Environment, Forests and Climate Change
MOFEC	Ministry of Finance and Economic Cooperation
MUDH	Ministry of Urban Development and Housing
MoWIE	Ministry of Water, Irrigation and Electricity
M&E	Monitoring and Evaluation
MRV	Measurement, Reporting and Verification (of reduced emissions from deforestation/forest degradation and associated activities)
PCR	Project Completion Review
PSNP	Productive Safety Nets Programme
REDD+	Reducing emissions from Deforestation and Forest Degradation. This is an effort to create a financial value for the carbon stored in forests. "REDD+" goes beyond deforestation and forest degradation, and includes the role of conservation, sustainable management of forests and enhancement of forest carbon stocks.
SCIP	Strategic Climate Institutions Programme
SLMP	Sustainable Land Management Programme
SNNPR	Southern Nations, Nationalities and Peoples Region
VfM	Value for Money

Contents

1	INTRODUCTION.....	4
1.1	INTRODUCTION TO ASSESSING VFM	4
1.2	REVIEW QUESTIONS	5
1.3	ABOUT THE REPORT	5
2	APPROACH, METHODOLOGY AND LIMITATIONS.....	6
2.1	METHODOLOGY AND PROCESS.....	8
2.2	APPROACH	6
2.2.1	<i>Definitions Used</i>	6
2.3	LIMITATIONS.....	8
3	ASSESSMENT OF FTI RECIPIENT SECTORS	11
3.1	ECONOMY.....	11
3.2	EFFICIENCY.....	16
3.3	EFFECTIVENESS	21
3.4	EQUITY	26
3.5	OVERALL VFM.....	28
4	VFM GOOD PRACTICES	30
5	CONCLUSIONS.....	32
5.1	RECOMMENDATIONS	33
ANNEX 1: SECTOR ANALYSIS.....		35
A1.1	MINISTRY OF AGRICULTURE AND NATURAL RESOURCES (MOANR).....	35
A1.1.1	<i>Economy</i>	35
A1.1.2	<i>Efficiency</i>	36
A1.1.3	<i>Emerging Unit Costs and Benchmarking Across MOANR FTIs</i>	37
A1.1.4	<i>Effectiveness</i>	46
A1.1.5	<i>Conclusion</i>	52
A1.2	MINISTRY OF ENVIRONMENT, FORESTRY AND CLIMATE CHANGE (MEFCC).....	53
A1.2.1	<i>Economy</i>	53
A1.2.2	<i>Efficiency</i>	54
A1.2.3	<i>Emerging Unit Costs, Benchmarking of MEFCC Projects</i>	54
A1.2.4	<i>Effectiveness</i>	57
A1.2.5	<i>Conclusions</i>	58
A1.3	MINISTRY OF INDUSTRY (MOI)	58
A1.3.1	<i>Economy</i>	58
A1.3.2	<i>Efficiency</i>	59
A1.3.3	<i>Effectiveness</i>	59
A1.3.4	<i>Conclusion</i>	60
A1.4	INDUSTRIAL PARKS DEVELOPMENT CORPORATION (IPDC).....	60
A1.4.1	<i>Economy</i>	60

A1.4.2	<i>Efficiency</i>	60
A1.4.3	<i>Effectiveness</i>	61
A1.4.4	<i>Conclusion</i>	61
A1.5	MINISTRY OF TRANSPORT	61
A1.5.1	<i>Economy</i>	62
A1.5.2	<i>Efficiency</i>	64
A1.5.3	<i>Effectiveness</i>	65
A1.5.4	<i>Conclusion</i>	65
A1.6	MINISTRY OF URBAN DEVELOPMENT AND HOUSING (MUDH)	66
A1.6.1	<i>Economy</i>	66
A1.6.2	<i>Efficiency</i>	68
A1.6.3	<i>Effectiveness</i>	69
A1.6.4	<i>Bureau of Urban Development Jigjiga Solid Waste Management Project</i>	70
A1.6.5	<i>Dessie City (Amhara) Solid Waste Management</i>	71
A1.6.6	<i>Conclusion</i>	73
A1.7	MINISTRY OF WATER, IRRIGATION AND ELECTRICITY (MOWIE).....	73
A1.7.1	<i>Economy</i>	74
A1.7.2	<i>Efficiency</i>	74
A1.7.3	<i>Effectiveness</i>	76
A1.7.4	<i>Conclusion</i>	76
ANNEX 2. VFM INFORMATION COLLECTION TOOL.....		78
A2.1	ECONOMY.....	78
A2.2	EFFICIENCY.....	78
A2.3	EFFECTIVENESS AND COST EFFECTIVENESS.....	79
A2.4	ADDITIONAL ON VFM.....	79
ANNEX 3. REVIEW MATRIX.....		80

1 Introduction

1.1 Introduction to Assessing VfM in CHIP

The United Kingdom's Department for International Development's (DfID) Climate High-Level Investment Programme (CHIP) is supporting Ethiopia to plan and implement its Climate Resilient Green Economy (CRGE) vision. The CRGE vision sets out plans for Ethiopia to become a middle-income country by 2025 with a zero net increase in carbon emissions. The Government of Ethiopia (GoE) intends to use climate finance to complement and strengthen its development investment, building resilience and green growth objectives across sectors.

CHIP has four main components including CRGE mainstreaming support, forestry, food security and disaster risk management, each implemented through different modalities. The CHIP Final Review focuses only on the first component, including technical assistance support to the CRGE Facility.

DFID's support for the CRGE has two main components: technical assistance (up to £1 million) and the funding of Fast Track Investment (FTI) projects (£13.5 million). This report, which looks at the Value for Money (VfM) of that support, focuses on the FTI funding.

There are 26 FTIs under the six sectors¹ that have received DFID support, but these are frequently divided into multiple initiatives – for example in the two MUDH projects, there are 16 initiatives. Given the time available, it was not possible to assess each individual FTI against the 4Es performance criteria (economy, efficiency, effectiveness and cost effectiveness and equity). This analysis therefore focuses on sectoral performance more broadly and uses internal benchmarking to compare projects within the same sector. Where possible, emerging unit costs at the economy and efficiency levels have also been identified.

¹ The Ministry of Agriculture and Natural Resources (MoaANR), the Ministry of Environment, Forestry and Climate Change (MEFCC), the Ministry of Industry (MoI), the Industrial Parks Development Corporation (IPDC), the Ministry of Transport (MoT), the Ministry of Urban Development and Housing (MUDH) and the Ministry of Water, Irrigation and Electricity (MoWIE).

1.2 Review Questions

The CHIP Final Review focuses on three over-arching questions. These review questions were developed through an iterative process between DfID, the CRGE Facility and LTS between October 2015 and May 2016, at which time they were finalised.

The three high-level review questions agreed with DfID and the CRGE Facility to guide the review are as follows.

1. How adequate and relevant were DfID investments in the CRGE Facility to the GoE's ability to deliver its CRGE vision and strategies?
2. **Were the outcomes that this investment achieved, worth achieving given the investment? Did the programme represent value for money?**
3. What are the factors that enable technical assistance provided by CHIP (and other partners) to successfully contribute to improvements in the GoE's systems for climate response?

This report answers Question 2 of the above, the sub-questions of which are included in Annex 3.

1.3 About the Report

This report starts by discussing the approach and methodology used for the VfM analysis, as well as the limitations. The VfM findings are then presented across the 4Es (economy, efficiency, effectiveness and cost effectiveness, and equity), covering all sectors and drawing on common features as well as exceptions. Specific examples of good VfM practice from across the programme are then presented before the report concludes with an overview of the findings and recommendations to improve cost effectiveness and VfM accounting in future phases of the CRGE. In-depth analysis for each sector, organised around the 4Es, is presented in Annex 1.

2 Approach, Methodology and Limitations

2.1 Approach

The UK Government's National Audit Office (NAO) recommends assessing VFM against three criteria (the 3Es): economy, efficiency and effectiveness. DFID and the other UK Government departments are bound by the NAO's guidance. In addition, DFID has added equity as a 4th E in their application of VFM, which should be a cross-cutting consideration in the VFM assessment.

The VFM approach used in this report is primarily based on DFID's VFM Framework (which builds on the NAO's 3E Guidance). However, due to the diversity of development programmes, there is no one way of assessing VFM and the DfID guidance is designed only as a loose framework. A brief description and definition of the terminology used in this report and an outline of the VFM approach used are provided below.

2.1.1 Definitions Used

Economy

Economy analysis assesses the cost per input used in the delivery of a programme. However value for money is not achieved by the lowest possible price for a given input; it is a function of price, appropriateness, quality, and timeliness of sourcing the input. The key considerations under economy in CHIP were procurement and budget cost structure, with a particular focus on management versus implementation costs.

Efficiency

Efficiency analysis reviews the cost per output generated by the programme. Efficiency metrics focus on beneficiary and output numbers rather than outcomes for beneficiaries. However, it is important to note that value for money is not necessarily guaranteed by achieving the lowest possible cost per output. The quality of delivery of outputs is also a concern for efficiency.

Key considerations under efficiency are input types, delivering at the best scale to get economies of scale, processes used to minimise costs and maximise results; quality of delivery and risk management.

Effectiveness and Cost Effectiveness

Effectiveness analysis considers how well the outputs deliver intended programme outcomes. Cost effectiveness is achieved if this is done at the lowest possible cost. The key issues related to effectiveness are coherence of outputs, targeting (the right beneficiaries, the right interventions, etc.), sustainability, influencing and wider socio-economic impacts.

Equity

Equity is a sub-set of effectiveness. It means extending the reach of development benefits to disadvantaged and marginalised groups, mainly (but not exclusively) women and the poorer segments of society.

Measuring VfM

VfM calculations link reporting of costs to results, in other words, expenditure and logical framework outputs. To the extent possible, VfM calculations also need to consider all costs involved, including those incurred by beneficiaries (private costs). There are both qualitative and quantitative methods for assessing VfM.

Qualitative measures can include descriptions of improvements in procurement practices (economy); improved risk management or quality assurance of output delivery (efficiency), or qualitative evidence towards change at the outcome or impact levels, for example, through case studies (effectiveness).

Quantitative measurements commonly include Cost Benefit Analysis (CBA)²; cost effectiveness analysis; calculating efficiency savings (recorded, evidenced and tracked); and comparison of unit costs.

The VfM Approach Used

The VfM approach used involves both qualitative and quantitative analyses. The quantitative analysis combines cost efficiency and cost effectiveness analyses, and unit cost comparisons at the economy/input and efficiency/output levels.

A CBA of the FTI projects was not undertaken for several reasons. First, the FTI projects have mostly been running for a relatively short-time and the anticipated benefits are therefore unlikely to have been fully delivered, particularly those related to significant income and livelihood changes. Second, although in some sectors some benefits from DFID's support to CRGE have been largely achieved – for example those related to capacity building and mainstreaming the CRGE vision – these types of benefits are hard to quantify and monetise,

² Also applicable in this category are break-even analyses, Social Return on Investment Approaches (SROI), etc.

and are therefore not easily measured through a CBA. Finally, lack of cost data at output and outcome levels and inconsistencies in reporting of other results across the six sectors (such as beneficiary numbers and hectares covered) make it difficult to meet the data requirements necessary for a credible CBA.

The primary approach used was therefore to examine the cost drivers across FTIs in different sectors, to present some unit costs at the input level and examine unit costs at the output level, with internal benchmarking within each sector based on results from across the FTIs. More evidence was available on inputs given and delivery of outputs than benefits incurred. The cost drivers were therefore classified based on the level of information available. For example, the 'cost per beneficiary' metric is used to refer to the number of 'persons/households reached with some assets and/or services' but not necessarily with intended outcome(s). 'Cost per beneficiary' has therefore been classified under efficiency rather than effectiveness, while issues pertaining to effectiveness of an intervention or a project were mainly discussed qualitatively.

In addition, projects' delivery was considered from a climate resilience and adaptation lens. FTIs have the dual objective of providing adaptation benefits and development 'co-benefits', such as increases in income and livelihoods opportunities from climate smart initiatives. Issues related to financial reporting, fiduciary and procurement in FTIs are therefore also summarised, as well as examples of VfM good practices observed. Finally, a separate section on equity is provided, which discusses how the equity aspect of VfM have been addressed and achievements among the FTIs studied.

2.2 Methodology and Process

A two person team (the VfM Team), composed of a VfM Expert and a Public Finance Management Expert, was responsible for delivering the VfM assessment. A step-wise approach to the VfM assessment was used, in which the following steps were undertaken:

- Prior to the Ethiopia mission, the VfM team prepared a VfM Data Collection Tool (presented in Annex 1). The tool was based on the requirements of DfID's 4Es and a thorough review of available documentation at the time.
- On the first day of the country mission, the VfM Team familiarised the rest of the CHIP Review Team with the Data Collection Tool, so that the whole team was able to assist with identifying relevant stakeholders, documentation, and information.
- During the first week of the country mission (in June 2016), the VfM Team met with technical and financial leads of the FTI projects based in federal ministries of all six sectors in Addis Ababa.

- The VfM Team then went on field visits to Somali and Amhara to meet the technical and finance leads in the regional bureaus and woredas engaged in FTIs. These visits were primarily, but not exclusively, focused on the three sectors under review, namely agriculture, environment and forestry, and urban development. A third team, who visited Harari, fed back findings to the VfM Team. The field visits provided an opportunity to obtain detailed financial information on the cost drivers and unit costs of the FTIs, as this type of information was not available at federal level.
- After the field visits, the VfM Team met with the rest of the Review Team in Addis Ababa to provide feedback on the field visits and beneficiary consultations, consolidate findings, and to assess the need for additional information follow up and meetings.
- After the mission, the VfM Team prepared field notes and a preliminary analysis of unit costs and output costs ahead of the team workshop in Addis Ababa in mid-July 2016. During the second mission, the team discussed the preliminary findings and used the opportunity to have follow-up meetings with key stakeholders and to obtain additional documentation required for the VfM analysis.
- In addition to the CRGE reporting and primary data collected through interviews in the field, the VfM Team undertook a desk-based review of information and findings on similar projects in Ethiopia and the region, including Annual Reviews of other completed and ongoing DFID programmes, and other bespoke VfM analysis by DFID and other programmes.
- The desk-based review of documentation and drafting of the analysis, including a thorough quality assurance review, were undertaken in July and August 2016.

2.3 Limitations

Consultations and review of documentation revealed that the financial data collected and presented by the Government does not support VfM calculations. The way financial information is presented is either based on trial ledger bank balance statements, or periodic expenditure based on government codes of cost categories, neither one lending itself to VfM calculations. Examples of the latter are provided in the analysis below. For some sectors, unit costs of inputs such as trees, seedlings, water pumps, etc. were available in the documentation, however this constituted only a handful of unit costs. In addition, there was no evidence that unit cost proposed in a report at federal level were used by all FTIs across all regions/woredas for each sector.

With the exception of MoANR, the FTI recipient sectors provided little information that could be used for VfM analyses. Overall, reporting of both results and costs needs significant improvement across the board.

A number of output-based calculations were made mainly based on extra data requested at the woreda and regional levels at meetings during the field visits. This means that there may have been unintended mistakes, and the results are presented with this caveat. For example, for the agriculture sector projects, it was possible to calculate some cost per beneficiary figures of various components such as poultry and watershed management. However, across the agriculture sector projects, a household can be a beneficiary of several interventions at the same time (for example, women may be engaged in poultry and crops, men in keeping of larger livestock such as heifer and providing labour for digging, etc.), there is therefore potentially double counting in the figures used in the analysis (because there are overlaps and double counting in MoANR figures provided).

Some of the financial data that was provided was only made available in hard copy, or in the case of MUDH, only in Amharic. The VfM Team therefore had to translate to English, and in most cases type up finance data electronically or re-construct and re-organise data, in order to be able to use in this report, potentially introducing human error.

The relatively limited time allowed for the VfM inputs meant that it was not possible to examine all FTIs in detail, the analysis instead focuses on the following VfM aspects: the economy analysis focuses on key cost drivers, procurement methods used, and input unit costs where available. Efficiency looks at fund utilisation (at the sector level), and where relevant and applicable at the FTI level; it also looks at cost per beneficiary and other output based metrics. The effectiveness sections examine the results achieved and their sustainability in each sector. The effectiveness findings should be read in conjunction with other sections of the Final Review report, such as the sector assessment case studies from the field visits, which provide additional detail.

Finally, costs incurred by beneficiaries of the FTIs were not included in the calculations. VfM calculations ideally need to take into account all costs including those incurred by beneficiaries, in the form of private or opportunity costs. However, there was no systematic data on the level of such costs and they were therefore excluded.

3 Assessment of FTI Recipient Sectors

The findings presented below are compiled from all six sectors studied during this review. They follow the 4Es approach. **The detailed 4Es analysis for each sector can be found in Annex 1**, which includes findings at the federal and regional levels, comparisons of regional projects where applicable, and VfM conclusions.

3.1 Economy

Finding 1 Although unit costs of inputs are often available for the sectors, it was not possible to identify from the financial information provided, whether they matched the actual costs during implementation.

For many of the FTI recipient sectors, the Review Team were given documentation on various unit costs of frequently procured items, such as trees (including types of trees), seedlings, beehives, heifer, motor pump, geomembrane ponds. However, it was not possible to follow through on the actual costs incurred for these under the FTIs. This was because in the GoE financial and accounting systems, project financial information is not prepared in a way that allows these to be verified. For example, for the agricultural sector, most inputs bought are shown under a single 'agricultural inputs' category, thereby making it very difficult to reach unit costs³. Many of the sectors also presented their expenditure information for the FTIs under categories based on government account codes, such as fuel, per diems, training, and transport costs, which could not be used for the economy analysis.

Where unit cost information was available, unit costs usually differed significantly across regions under the same sector. For example modern beehive costs were markedly different in Somali and Amhara (ETB 3,000 in Somali and 1,200 or 1,700 in two woredas visited in Amhara).

One item that was almost uniformly at the same unit cost across the recipient sectors appears to be the payments for manual labour (ETB 150). For per diem payments, some

³ It could be possible if only one type of item was procured and the FTI project reported the quantity of the items purchased. However, in practice, many items were included under these categories, making it impossible for unit costs to be untangled.

sectors chose to apply the GoE rates, which are based on the seniority of the official and often lower than the CRGE Facility rate as per the Operations Manual (ETB 290).

Finding 2 Key cost drivers, where this information was available, were not uniform across all sectors. However training, per diem and transport costs routinely featured among the key cost categories.

The breakdown of expenditure for MoWIE, MoI, IPDC, and to some extent MoT, was not presented in a way that enabled different cost categories to be identified. For MoANR, agricultural inputs and equipment were the biggest cost drivers, followed by training, per diem payments and freight and/or transport costs. Under MUDH, many of the projects featured construction as the major cost item (for examples, constructed structures included compost sheds and storage or transfer stations). Construction costs as percentage of total costs among the FTIs were: Shire (96%), Bishofto (68%), Hawassa (67%) and Harari (39%). For MEFC, wage payments for manual labour in nurseries and tree planting activities, and agricultural inputs were the major cost drivers among the sector FTIs.

It was not possible to assess for each case, whether that level of spend on various items such as per diems or trainings were in proportion to the project's main modality or its needs, although exceptions which called for clarification by implementers have been noted. More detailed analysis can be found in Annex 1.

Finding 3 The CRGE Facility did not propose a uniform percentage of supervision and M&E costs for all sectors to comply with, these costs therefore differed across sectors, and within sectors between the federal and regional levels.

MEFC recorded the lowest supervision and M&E costs among all the sectors at the federal level (4%), while IPDC recorded the highest (20%). However, information on supervision and M&E costs was not available for all of the sectors studied (MoI, MoT and MoWIE did not provide financial information in a way that Supervision and M&E costs could be determined).

MoANR budgeted for 8% for federal supervision and M&E costs; 11% for regional supervision and M&E costs, and out of the remaining 81% for implementation, 5% was budgeted for overheads (described as per diems, fuel etc.). These supervision costs are on the high end of the range compared to the other sectors, and externally for instance the

Climate Change Forum Ethiopia (CCF-E)⁴ and other NGOs outside Ethiopia⁵. However caution is advised in these comparisons, as the definitions of what the categories include may differ, and it we may not be comparing like with like.

For MUDH, the funds allocated for supervision and M&E at the federal level amounted to ETB 2.7 million (£940,000), which corresponds to 9% (of the ETB 29.5 million total budget). A further analysis by the Review Team found that total supervision costs for MUDH, including its regions, amounted to at least 11%. This is presented in detail in Annex 1.

The table below shows a summary at federal level:

Table 1. Federal supervision and M&E funds in FTIs across sectors

Sector	Percentage (of total funding)
IPDC	20%
MUDH	9%
MoANR	8%
MEFCC	4%
MoWIE	n/a*
MoT	n/a
MoI	n/a

*n/a: not available from documentation or meeting notes

Finding 4 Based on the documentation provided and the consultations at federal and regional levels, it appears that procurement systems were efficiently followed. However, a number of procurement questions could only be answered with a more detailed procurement audit of the FTIs.

There was insufficient time available under this review to look in detail at all procurement issues. The Review Team discussed the procurements carried out under projects at federal and regional levels and were presented with documentation where it was readily available. In

⁴ Based on a proposed budget for cost-extension to MoANR in 2016, CCF-E's M&E and administrative expenses (excluding staff costs) categories amounted to 15% of the total amount requested. Including staff costs, it was almost 23%.

⁵ Refers to the study referenced in 2011 Mozambique Citizen Engagement Programme Business Case. 'The study, that was carried out for DFID Uganda, found that the NGOs' administrative costs (which included management costs) averaged around 16%-18% regionally.'

addition, all fixed assets (procured or constructed for the FTIs) have been registered in the fixed asset register that is kept within MoFED and reconciled with their annual inventory.

The majority of the FTIs featured local procurement following national procurement rules. Implementing woredas were mandated to execute their procurements locally, which was then undertaken on the basis of a procurement plan and budget that was transmitted from the respective regional bureaus to their woredas.

International procurement was uncommon. The exception to this are the MoWIE projects, where all but one carried out international procurement. For the projects that used international procurement, it led to major delays. As a result, at the time of writing this report, three of the projects had still not commenced their main interventions or distributions to beneficiaries. The MoWIE projects are therefore lagging significantly behind, compared to the other FTI recipient sectors. The international procurement route was used also by MoANR for purchasing 22 laptops, 26 motorcycles and GPS devices, organised through the CRGE Facility and using the UN system. This process had also not been finalised at the time of writing this report. Once procured, the items will be given to MoANR's regional and woreda offices. A lesson here is that project planning should take into account time constraints and expected delays, particularly where international procurement is involved. Alternatively, private sector agents could be involved, ensuring a more timely turn around.

All fixed assets, procured or constructed for the FTIs, are registered in the fixed asset register that is kept within respective MoFED offices and reconciled with their annual inventory.

Despite a number of issues and some delays, FTI sectors, regions and woredas should still be given credit for turning around procurements and delivering many projects in a relatively short period of time, often less than 18 months.

Finding 5 Thorough assessments before deciding on what type of procurement to carry out, what to procure and how much they cost, were not uniformly achieved across the FTI sectors. This may have been due to the short time frames allowed in the proposal stage, as well as capacity limitations in some cases.

For the MoANR FTIs, to a considerable extent, there was evidence of pre-proposal and/or pre-procurement assessments before deciding what type of agricultural inputs to procure for which areas or projects. Two examples for this are the allocation of hand-held tractors for larger land-holding regions; and the distribution of small ruminants instead of larger ones as a result of beneficiary preferences.

However, other sectors did not provide evidence of similar assessments of the range of options prior to procurement. For example, based on discussions with MoT and review of the documentation, it was not possible to answer the following questions regarding MoT's FTIs: Why were electric bikes procured instead of regular bicycles? Why bespoke smart parking towers were decided on, rather than other types of parking, or better utilisation of existing spaces that might be available for parking? In addition, in the case of the latter project, FTI funds were insufficient to pay for even one of the seven units that were proposed, indicating inadequate planning. Similarly for MoWIE procurements, there are questions as to why MoWIE decided to import solar technologies directly when the private sector could do the same. A response to this questions was not articulated in the discussions or the documentation available to the review.

In relation to the same issue, the challenge of under-estimating of project (unit and component) costs was frequently observed across all sectors and projects. For example, in Somali, the Bureau of Urban Development had budgeted ETB 10,000 for each garbage container it aimed to procure. However the actual price was ETB 45,000, which meant that it had to buy less than planned. Similarly, 200,000 ETB was budgeted for a tractor but it actually cost 4 times that amount. Examples of under-estimating costs are available from across all sectors and many of the FTIs. These results indicate that the government departments had sufficient time to undertake thorough project planning and design during the first round. In the next phase of CRGE projects, adequate time should be allowed for better planning of budgets and other project design activities.

Finding 6 During the federal consultations and the field visits, the Review Team did not come across any wrongdoing or reports that indicated any fund misappropriation or abuse of authority.

Despite fiduciary risk not being part of the Final Review Terms of Reference, the VfM Team included some questions about financial management and compliance in the stakeholder interviews. Based on federal consultations and the field visits, the Review Team did not come across any wrongdoing in this regard, nor any reports that showed any fund misappropriation or abuse of authority. Further, there was evidence of financial auditing at all levels.

The CRGE Facility and all the implementing sectors apply MoFED's established systems and procedures. Furthermore, internal audits are carried out at woreda and regional levels and there are spot-checks by finance officers at the Facility. For example, by the end of 2015, the CRFE Facility had carried out monitoring missions to cover over 40% of the FTIs⁶. The joint

⁶ CRGE Facility Quarterly Progress Report for DFID, October-December 2015, p.23.

M&E function coordinated by the CRGE Facility, as well as the routine monitoring and supervision by the federal officials have provided a useful avenue for identifying and discussing any risks and challenges. The latest external audit reports were provided, which provided an independent opinion of the CRGE Facility operations. CRGE Inter-Ministerial Management Committee meetings also provide a higher-level supervision and compliance function.

Many of the federal and regional stakeholders talked about the measures they had implemented for being 'audit-ready' at all times. In addition, donors engage external experts to carry out fiduciary risk assessments. DfID routinely does this before extending funding to any entity, including government, local and international NGOs. Such assessments were done twice in the past few years for DfID, and the reports were made available to the review team.

Finding 7 There is an expectation among key stakeholders that financial reporting and management, particularly at regional and woreda levels, will improve with the change over to the Channel One system of transfers.

Currently, funding for CRGE projects from DFID goes to the MoFEC CRGE account which is held at the National Bank of Ethiopia. MoFED then transfers these funds, using Channel 2 (also known as Channel 1B), to the six sectors/Ministries. The Ministries then transfer the funds to implementing regions and woredas.

It has been agreed that for the next round of CRGE projects, the flow of funds will follow the Channel One route, as is the case with larger programmes such as the Productive Safety Nets Programme (PSNP) and Sustainable Land Management Programme (SLMP), giving MoFEC a greater control over financial management and reporting.

The CRGE Facility is currently using the Peachtree accounting system, and has not started using IBEX. Out of the FTI recipient sectors, only MUDH (and its regions) is using IBEX at the moment. All the remaining sectors, and their regional bureaus are using Peachtree. It is anticipated that IBEX will be rolled out to all sectors in the next round of CRGE projects.

To further strengthen the financial management, the CRGE Facility recruited two finance officers and two 'spot-checkers'. The finance officers are tasked with obtaining good quality financial information from the regions and woredas, as well as providing them with basic training and mentoring to improve timely reporting standards. The spot checkers go to the field offices frequently and ensure compliance as per the Operations Manual.

3.2 Efficiency

Finding 8 Fund utilisation varies across the sectors in terms of their overall allocations and is low for most sectors (less than 90% for all sectors apart

from IPDC). Fund utilisation was also low for many individual FTIs (at June 2016 when the projects were supposed to finish). As a result, a new deadline of December 2016 has been agreed.

A sectoral comparison is provided below, showing the performance across the sectors.

Table 2. Utilisation of FTI Funds across the recipient sectors

Ministry	Transfer Budget From MOFEC	Settled balance	%
IPDC	10,175,950.00	9,732,940.00	96%
MoANR	129,219,667.00	109,016,157.00	84%
MEFCC	77,494,810.00	65,380,934.63	84%
MoI	12,288,052.00	9,716,933.00	79%
MOUHD	35,202,837.00	25,882,900.62	74%
MoT	30,257,260.00	7,845,584.00	26%
MoWIE	95,176,497.00	1,835,813.00	2%

Source: CRGE Facility Presentation to Donors, May 2016.

As of the end of April 2016, IPDC had utilised the highest percentage of the federal allocation (96%), while MoWIE had utilised the least (only 2%). It is the VfM Team's understanding that these figures do not include the additional funding provided. As discussed above, MoWIE has experienced significant delays due to international procurement and a number of sectors have received an extension to December 2016, by which time they intend to have utilised the remaining budget.

Overall federal supervision and M&E costs appear to have been well-utilised across the sectors, with the exception of MUDH which, at the time of reporting, had only utilised 55% of its M&E and supervision budget. The reason for this low utilisation was unclear in this case.

Fund utilisation delays were due to capacity limitations and the relatively short duration of the FTI projects, as well as delays in fund transfers. These challenges were noted in the April 2016 Progress Reports and were also reported during the field interviews. For example, field meeting notes from Somali Region note that: *'The system of fund transfer is inefficient since all woredas (in a region) receive funds simultaneously. When there is a time lag due to tardy woredas who do not submit their performance/financial reports in a timely manner, the more efficient woredas do not get funds unless all woredas have submitted their reports'*. Further, the

lack of flexibility in transferring money between budget lines in a quarter contributed to the delays.

Nevertheless, nearly 50 projects were implemented in a relatively short time frame and this is rated as good performance in terms of overall efficiency.

Finding 9 Government contribution (leveraging) to FTIs was important for their successful delivery and, at times, equal to or above the whole of the FTI funding. This also demonstrates good buy-in and ownership for the CRGE.

There were no conditions, by the Facility or the GoE, as to how much or in what form government contribution to FTIs should be. Contributions were therefore provided in an *ad hoc* manner across the sectors and projects. However, one factor that was universal across all CRGE FTIs was the use of government office premises, staff time, vehicles and other equipment. In some sectors there were exceptions, such as in MoT⁷ where the hiring and payment of wages for a CRGE coordinator was paid for from the FTI funds.

In a number of sectors, project inputs were also procured from GoE funds. For example, the Dessie (Amhara) Bureau of Urban Development bought nine additional tractors for solid waste management at an estimated contribution of ETB 9.5 million (£328,000), almost tripling the FTI funding of ETB 3.5 million (£121,000).

During this review, extensive efforts were made to quantify and monetise this type of contribution. For example based on information provided by the Jigjiga (Somali) Bureau of Urban Development, government contribution was estimated at ETB 1.0 million (£36,000), a significant addition to the FTI funding of ETB 1.8 million (£62,000), corresponding to 72% of the FTI funding. This estimate was based on a portion of salaries of eight staff involved in the project (time-based apportioning), office space and utilities, and a project-related data assessment study that was carried out and paid for by the municipality funds. Similarly in the Lay Gayint woreda (Amhara) agriculture project, government-contributed staff time was calculated by the review team at around ETB 113,400 (£4,000).

Other types of leveraging under FTI implementation were as follows:

- Projects leveraged the contribution of community labour in many natural resource management activities. Such contributions were noted in Oromia, SNNPR and Somali, in MOANR, MUDH and MEFCC projects⁸.

⁷ Annual cost for the employee including salary and pension was ETB 132,100 as per MOT reporting.

⁸ For example, MEFCC projects in Amhara reported that the labour force that was used to treat the degraded lands was contributed by the local communities for free. Total number of person days contributed were 684,627 which was equivalent to \$850k. This calculation by MEFCC appears too high, according to the review team, however it was confirmed during the field work that communities often participated pro-bono in public works.

- DFID funding to CRGE has influenced other development partners such as Austria, which committed €630k for FTI projects in Somali and Afar regions.
- Finally, DFID provided additional resources for technical assistance to develop the Green Climate Fund (GCF) programmes and there were also lessons from FTIs that strengthened the GCF proposal. Many of the FTI recipient sectors have put proposals of \$ multi-million funding from the GCF.

Finding 10 Significant difficulties were encountered by the review team in calculating unit costs at the output level. This is because the financial reporting by sectors in its current format does not allow such calculations to be made. Nevertheless, a number of calculations were made, and benchmarking, where feasible, is also provided.

As explained above, due to the reporting of financial expenditure, there are a number of challenges in assigning costs to project outputs and outcomes. Total expenditure incurred or planned and reported beneficiary figures were used to estimate the cost per beneficiary metric across most of the sectors and interventions where feasible. The review aimed to make an internal benchmarking across projects within the same sector, or for the same metric across sectors. A detailed analysis on those for each sector, with projects examples can be found in Annex 1. Below in Table 3 we present a summary of the output costs calculated.

It should be noted that some of these, such as cost per job created, would normally be presented as a cost effectiveness measure. However, due to the type of results information available, these have been classified here as output related metrics. This is because there was a lack of systematic and robust evidence as to the effectiveness of many of the FTI interventions. In the case of employment creation, for example, across all sectors that reported it, there is limited information about the sustainability of the jobs that were created⁹. Many of them may be short-term, that is less than 6 months, such as in the case of IPDC. In addition, cost per beneficiary may include individuals or households reached with an intervention, rather than only individuals or households that benefitted from the intervention with the intended outcome. More detailed assessment on this, particularly for MoANR, can be found in the detailed sector write up in Annex 1.

⁹ Exceptions were noted, such as in Jigjiga (Somali) solid waste management project, discussed in detail under MUDH write up in Annex 1.

Table 3. Summary of emerging unit costs (output-level) across FTI sectors

Item	Sector	Cost
Cost per hectare afforested	MEFCC	£65-£143
Cost per beneficiary	MEFCC	£45-£224
Cost per job created	MUDH	£1,260
Cost per overall beneficiary	MUDH	£130-£180
Cost per temporary job created	IPDC	£480
Cost per poultry beneficiary	MoANR	£50-£370
Cost per beneficiary household	MoANR	£415-£1,000
Cost per job created*	MoT	£1,736
Cost per biogas digester	MoWIE	£2,610
Cost per solar pump installed*	MoWIE	£2,223
Cost per solar lantern distributed*	MoWIE	£11

Source: compiled by the author.

*based on planned costs, not actual.

Several other metrics, not covered in the table above, can be found in Annex 1 (particularly for the MoANR and MEFCC projects).

The cost per beneficiary metric is useful, when applicable, in comparing the costs and benefits that may have incurred from MoANR interventions. Due to a high level of transfer of productive assets, these costs were high. A comparison across regions is provided below. The detailed discussion on this is presented in Annex 1.

Table 4. Cost per beneficiary household comparison across MoANR regions and woredas

FTI/ region	Cost per beneficiary household
Awubare woreda (Somali)	£1,000
Enbessie Sarmidre woreda (Amhara)	£981
Amhara	£920
Somali region	£575

Source: compiled by the review

Finding 11 Going forward, it is important to ensure that FTI projects offer value for money, and that systems and measures are in place to monitor this on an ongoing basis. Detailed project reporting of results and their corresponding costs is important for VfM calculations to be made, and VfM reporting may become a requirement if DFID continues to support CRGE, with other donors possibly following suit.

The VfM Team had difficulty in reconciling financial and other result figures reported by sectors and the CRGE Facility. Within each sector, difficulties were experienced trying to reconcile region and woreda level information with sectoral reports. At the time of writing the report, the VfM Team was still checking back with sector counterparts on various information and calculations. Therefore, calculations provided in this report warrant caution as they may be based on errant data provided by the FTIs. **There is significant room for improvement on reporting of project achievements and the related costs incurred.**

Among the FTI recipient sectors, the most comprehensive and relevant reporting for costs and results was done by MoANR. MoANR also encouraged their regional counterparts to report on similar content and in similar formats. Although there were still gaps and inconsistencies noted by the VfM Team, as indicated in the detailed MoANR write up in Annex 1. Further, MoANR was the only sector which presented analyses (by Echnoserve) on the outcomes of their interventions, based on panel surveys of beneficiary households.

In the future, it is important to ensure that FTI projects offer value for money, and that systems and measures are in place to monitor this on an ongoing basis. VfM related reporting is likely to bring an additional burden on the project implementers and the CRGE Facility, who are already faced with demands from many development partners. However at the very least, future projects should be required to break down expenditure over the project years and over the entire duration of the project, and, to the extent possible, link them to project outputs.

3.3 Effectiveness

Finding 12 The main benefits from DfID's support to the CRGE can be summarised in four categories: organisational capacity improvement; learning; climate adaptation related benefits and development co-benefits.

In order to understand the effectiveness of DfID's support to CRGE, a comparison of the costs and benefits was made. The costs are known (at around £15 million). The benefits from DfID's support is summarised in four categories below:

- Improved organisational capacity at the CRGE Facility with systems established.
- Learning through engagement with FTIs with respect to CRGE mainstreaming across the selected sectors.
- Climate adaptation related benefits (such as reduced greenhouse emissions).
- Development co-benefits to FTI beneficiaries (such as increased income through asset transfer or employment creation).

An analysis of the development benefits such as enhanced livelihoods was done and provided below in this section and elsewhere in the report. However, unfortunately it was not possible to monetise the other results for the following reasons: for some of the benefits, such as improved organisational capacity or learning, it is not possible to monetise the magnitude of the benefit. For others such as employment creation, incidence of the benefit is not known definitively. Adaptation related benefits (such as reductions in greenhouse gas emissions) are not yet being measured systematically.

Finding 13 Capacity within the CRGE Facility has been improved, with organisational and staffing systems established and effectively completed.

Significant evidence for the improvement in CRGE Facility capacity is provided by the accreditation of the Facility for direct access to GCF funding. Interviews with internal and external stakeholders as part of this review confirmed that DFID's technical assistance support has been instrumental in achieving this result. Further, the Operations Manual was referred to by many informants at the federal and regional levels, demonstrating a high degree of institutionalisation.

Finding 14 There has been significant learning on climate related project design, implementation and monitoring across all FTI recipient sectors, evident both in documentation and in consultations.

While this learning benefit does not lend itself to quantification, it is no doubt of significant value, particularly considering CRGE's involvement in GCF and other venues of climate financing. For example, key informant interviews with the MOWIE at federal level have indicated that this was a significant benefit from the engagement with FTIs, as they have less experience than many other sectors such as MEFC and MOANR in climate adaptation issues.

The extent of CRGE mainstreaming that was achieved is considered a key outcome, as the consultations revealed. There was a scoring effort by this review on ranking the sectors in terms of mainstreaming capacities, and it can be found in the main Review report.

Finding 15 Poverty reduction related benefits, such as increased incomes, employment creation or asset transfers, have also potentially occurred as a result of the FTI interventions. However, there is insufficient data on the magnitude and incidence of these benefits and they could not be monetised credibly.

The only sector which examined poverty reduction benefits from their FTIs was MoANR. Through its partner Echnoserve, post-project reviews were carried out in several of its regions using results-based panel surveys of selected households. This enabled a comparison between the costs of the asset transfer 'package' model used by MoANR¹⁰ and the benefits incurred by its beneficiaries. A detailed analysis of the 'integrated approach' is presented under MoANR in Annex 1. However, due to the difficulty of potential double counting of beneficiaries in a household, not knowing exactly which household ultimately received which type of interventions in a package, and further, and not being able to monetise all benefits in the package (such as from watershed management activities), it was not possible to come up with a 'benefit per household' figure. Where these were estimated, as shown in Annex 1, it was inconclusive whether they could break even with the very high cost of the packages, at times costing up to £1,000 per household (Amhara).

On the other hand, MoANR's asset transfers were found to be a potentially good modality for promoting resilience and adaptive capacity. However, due to their high cost, it is likely to be challenging to scale up the current form of transfers. Further, asset transfers can create tensions in communities by widening the wealth gap. A smaller and more focussed set of transfers would be needed if more households were to be reached.

Data to compare cost per beneficiary in MoANR's SLMP and the previous phase of its Household Asset Building Programme (HABP) were used as a benchmark. Although there were no major differences in the costs of individual items procured for the woreda reviewed, the overall costs per beneficiary varied. More details of this benchmarking analysis can be found in Annex 1.

For other sectors such as MUDH, and to some extent MEFC and MoT, employment creation was one of the main intended outcomes. MUDH reported over 800 jobs created, most of them garbage collection or cleaning in solid waste management. One particularly successful

¹⁰ Lists of the assets transferred can be found in Post-Project Reviews of Amhara, Gambella and Harari, by Echnoserve, June 2016.

example of job creation comes from Jigjiga, the details are provided below in Annex 1. However, the quality of the jobs reported varied, for example jobs reported by IPDC are understood to be of a temporary nature (less than 6 months). In addition, some sectors reported expected jobs rather than actual jobs created, for example MoT reported expected employment creation in the form of operators of the electric bicycles/tricycles, organised in three cooperatives. These are not up and running as at the time of writing.

MUDH interventions also resulted in the establishment of small enterprises, at least 170 of them according to documentation. For example in Jigjiga, a waste removal enterprise that has been set up as a result of the project is collecting fees directly and the kabeles are cooperating by levying fines on beneficiaries that do not pay fees where services were provided.

Finding 16 Increased involvement of the private sector could improve cost effectiveness of the FTIs.

In the next round of CRGE projects, care should be taken not to ‘crowd out’ the private sector in some interventions, and to actively seek linkages with and inclusion of the private sector. For example, in the case of energy-efficient cookstoves in Somali, it was essential to provide the beneficiaries (who make the stoves) with linkages to the markets, in order for them to exploit the livelihood opportunity in a sustainable manner. In addition, ‘low hanging fruits’ in CRGE priority sub-sectors should be picked, such as encouraging private sector involvement in trading and servicing of solar lamps, solar panels, solar water pumps; retail of LED lamps; production and sale of biomass fuel, energy saving cook-stoves etc,¹¹

Finding 17 Not all FTI projects had a coherent set of outputs, and this may have impacted their effectiveness.

This was true for many FTIs across all six sectors, however the review found this to be particularly the case for the MEFCC projects, where activities were insufficiently coherent to make sector wide conclusions. Applying the Theory of Change approach could have helped mitigate this problem, because it encourages thinking and formulating about the links between how activities and outputs lead to certain outcomes and impacts, and the mechanisms by which these take place (based on local and global evidence).

Finding 18 The potential for sustainability of FTI results achieved varies across sectors.

According to the post-project reviews carried out by Echnoserve, MoANR has delivered a number of good results in the short implementation period. In particular, it has increased

¹¹ Anthony Annan, Private Sector Strategy for Ethiopia’s CRGE, November 2015, p.40.

incomes from crop and livestock interventions, and enhanced productivity and water availability. However, a lot of these results were achieved by providing free seeds and fertilisers, which means they are unlikely to be sustainable. Similarly regarding livestock distributed to households, access to markets and veterinary services need to be available for this to contribute to a sustained income.

The review found that the forest sector work in Somali is unlikely to have lasting results, while results from the Joint Forest Management committee in Amhara are likely to be sustainable.

In the case of MUDH's solid waste interventions, prospects for sustainability look better; for example the Jiggiga enterprise is functioning well in Somali with 62 employees and over 5,000 fee paying clients. In Dessie (Amhara), the government has taken control of managing the waste removal service, however our calculations indicate that costs currently exceed the revenue by some margin, so it will be important to ensure that the ongoing subsidy is appropriate and manageable for the regional government.

Finding 19 Scaling up of the CRGE would require additional climate finance or funding through an existing large social protection programmes. At the FTI projects level, there are a number of remarkably successful approaches and interventions however they also pose challenges to scaling up either due to high costs or low relevance for climate adaptation.

During the review consultations, the issue of scaling up the small-scale FTI pilot projects was discussed extensively with key informants. When prompted, the sectors, particularly at federal level but also at bureau level, emphasised that the systems are well in place for handling funding of a much larger scale. This is likely to be largely accurate given GoE's experience with delivering large-scale development projects such as PSNP, particularly for sectors such as MoANR. However, the review team also observed that the sectors have been leveraging government contribution and at times other projects' resources for implementing the FTIs, such as use of PSNP vehicles (while charging of fuel used to the FTI accounts).

Many informants, especially at regional and woreda levels, when asked about challenges in implementation, emphasised that they were not given additional vehicles, computers or extra pay to work on FTIs. This of course was the point of FTIs and CRGE mainstreaming. It demonstrates that the CRGE was seen by some as another donor-funded programme, rather than mainstreaming into government's routine business.

At a higher level, scaling up of the CRGE would either mean receiving more climate finance, or funding as an add-on to existing social protection programmes such as PSNP or SLMP. At the project level, the VfM studied the FTIs and noted the more successful ones. For instance, a number of remarkable interventions were noted under MoANR's implementation.

However, scaling up would necessitate going beyond the coverage of a few hundred households, and this would not be feasible given the very high costs per household. In order to enable replicability, a much smaller and focused ‘package’ of assets or interventions would have to be designed, by analysing costs per output ahead of implementation, during the design and budget planning phase. It is recommended that MoANR carefully studies the ‘integrated approach’ and analyses its results before scaling up.

On the other hand, as was explained above, MUDH’s solid waste management project in Jigjiga Somali delivered good results under a modest level of funding. Almost 100 jobs were created and many women were employed. The enterprise that established has over 5,000 entities that it serves and collects fees from. This project approach could be replicated and scaled up to cover other towns in other regions, however the issue is the question of how relevant solid waste removal and management are to climate adaptation. This relevance questions is also applicable to a number of other FTIs, for example the greening of industrial zones (IPDC). The selection of the particular projects may also have to do with the short timeframe for FTI design and lack of experience with climate change adaptation and mitigation. Nevertheless, the first round of FTIs has equipped the participating sectors with valuable learning in this regard, which was emphasised by all key informants.

3.4 Equity

Equity is described as extending an intervention’s benefits to the disadvantaged or marginalised groups. These groups are mostly women and the poor(est) in a low-income country context.

Finding 20 Although the FTI projects do not appear to have exposed women to excessive burden, the projects also have not contributed to major changes in women’s status or authority in decision-making.

MUDH and MoANR did a good job of disaggregating results by women, and in the case of MUDH, by youth. However, among the FTIs reviewed and visited as part of the field work, the Review Team observed that gender reporting was limited to a head count of women among the beneficiaries. This does not enable a judgment on the extent of the socio-economic change that may have happened in these women’s lives. It is not possible to tell whether access to skills (through trainings, etc.), job creation or increased income are leading to improved status or more authority for women in decision-making. There is no analysis on the gender aspects of programming across FTIs.

Even if such changes were observed among female beneficiaries, given that most projects have been running for a relatively short time, it would be difficult to assess the degree to which the FTIs contributed to this change.

In the next round of projects under CRGE, gender considerations should be given more prominence, and sufficient gender analysis should be incorporated into design, implementation, monitoring and evaluation of the projects/programmes.

The 'cost per female beneficiary' metric analysis across the FTIs (when this information was available for calculations) shows that these costs were higher than cost per overall beneficiary¹².

A more thorough review of gender and direct beneficiary feedback related to DFID's support to the CRGE Facility can be found in the main Final Review.

Finding 21 There is insufficient evidence to conclude that all beneficiaries of FTIs constituted the members of communities that were most in need.

As the field visits and focus group discussions demonstrated, a mix of community-based targeting and selection by woredas or kebele committees were the basis of beneficiary selection. In some cases, such as MoWIE's solar lanterns project, female beneficiaries were targeted and these were identified in collaboration with Ministry of Women's Affairs and their bureaus in the selected regions (resulting in 8000 were female¹³ beneficiaries). MoWIE's beneficiary selection process appears to have been well considered.

However, in MoANR's Somali project, the Review Team found that the beneficiary selection process was not entirely transparent. For example, MoANR projects included 'ability to manage the activities' as one of the criteria in targeting individuals for participation in the project. For example, in Enebsie SarMidar (Amhara), the kebele staff conducted a wealth ranking and selected individuals from different wealth groups, targeting not only the neediest: 53% were poor, 37% were considered middle and 10% better off.

Similar to the reporting on gender, there is no thorough analysis among the project documentation on poverty reach of an FTI.

Finding 22 Landless youth are the most frequently cited vulnerable group across all sectors. Some activities were targeted specifically at these individuals but there is scope to widen the focus on off-farm activities to ensure they benefit.

There were activities intended specifically for landless youth in agriculture, forestry and urban sectors. However the focus group discussions, as part of the fieldwork, did not identify any beneficiaries from this group, although it was reported that one MEFCC project individuals

¹² Except in the case of IPDC FTI, where majority of beneficiaries were women.

¹³ Among these, female-headed households were prioritised.

from this category were involved in the beekeeping intervention. This should be considered in the design of future projects and specific targets for youth should be included.

Finding 23 Fair representation of all regions in Ethiopia, known as the ‘equity criteria’ meant that sometimes regional proposals which would otherwise not be deemed of merit, did go ahead and receive FTI funding.

One final issue to be discussed under Equity is the equity principle of the region selection by GoE, often referred to as ‘equity and representation’. According to this, GoE has to look after the interests of all regions equally and ensure that they all get a fair share among government investments. For FTIs, this meant that sectoral funding allocations had to extend to all or most regions, reducing budget for individual projects. Nevertheless, had it not been for this criteria, some of the regional proposals would not have gone ahead. This criteria therefore resulted in improved coverage of the CRGE.

Box 1. Selected Beneficiary Feedback on Equity

Beneficiary testimonial from Wadla woreda: *‘....Similarly the additional gains from crop and Sheep selling will be managed by men, but in all cases we use our additional incomes by consulting each other and with full agreement’*

Female beneficiary in Lay Gayint: *“Most of us have participated in all project activities either through our husbands or on our own...”*

Female beneficiary in Lay Gaint: *“Yes, they have selection criteria such as:*

- *Poor and vulnerable households;*
- *Poor women and jobless youth.*

3.5 Overall VFM

Finding 24 Taken together, the value of the results discussed above appear to provide good value for money as their benefits potentially exceed the investment made to CRGE by DFID.

Although some FTI projects did not appear to offer VfM due to poor design and implementation, and for some there was not enough information to draw a conclusion (possibly due to short timeframes, which may have prevented lessons from being integrated further into implementation). Overall, it appears highly likely that the benefits from the CRGE provide good VfM. In other words, there is most likely a value that goes beyond the projects,

in terms of establishing and testing CRGE systems and improving the government capacity for this type of work.

However, more evidence and VfM reporting on a periodic basis need to be generated by future projects to make more definitive judgment. DfID could assist the CRGE Facility in this respect by providing templates and additional guidance on VfM measurement and reporting.

4 VfM Good Practices

This section presents examples from good VfM practices and measures observed during the review of FTIs. In most cases, the stakeholders were not fully aware of DfID's 4Es approach to VfM, and used the term VfM to signify cost-conscious behaviour or a low-cost procurement. The exception for this was the finance officers at the CRGE Facility, who were knowledgeable on the VfM concept. Nevertheless, the examples compiled below are derived from CRGE related documentation, key informant interviews and the June 2016 fieldwork.

The examples are presented below along with which 'E' they correspond to:

- Use of a private sector firm and an NGO by MoANR FTIs (effectiveness).
- Use of climate information in project planning in Somali: through sharing of climate information at stakeholder workshops at the district level (which functioned like a longer term early warning system). Bureau of Agriculture and its two woredas decided to postpone some of the watershed management activities to the second year of implementation due to anticipated drought in the first year (effectiveness).
- Use of an internal auditor by Echnoserve (MOANR contractor) for compliance and monitoring across projects (efficiency).
- Frequent references to the CRGE finance Operations Manual by most stakeholders interviewed. This is evidence to systems being more established and operationalised (effectiveness).
- Cost conscious behaviour through the use of lower per diem rates than the ones indicated in the Operations Manual by the Bureau of Urban Development Somali and MoWIE, among others (economy).
- Recruitment by the CRGE Facility, of two spot-checkers and two additional finance officers whose job is mainly to carry out field level verification, compliance and follow up on financial information from FTIs (efficiency).
- Significant GoE and at times beneficiary contribution to FTIs. As shown above, GoE has provided staff, office space, use of vehicles among other contributions to the projects. Sometimes, FTIs were used to fund small allocations to significantly bigger government projects (such as in Addis Bureau of Transport projects). Beneficiary contribution was also significant, for example in MoANR and MEFCC projects, in natural resource management interventions and others (efficiency/effectiveness).
- There was a section on VfM in the final report of the IPDC on their FTI project. It discussed economy, leveraging, efficiency and effectiveness. Although not everything

that was reported under these categories was relevant to VfM, this still shows a level of thinking on VfM in relation to their project (efficiency).

5 Conclusions

The CRGE FTI projects did not report results and costs in a way that lends themselves to VfM calculations. They did not have periodic reporting on VfM indicators, nor did they feature output-based costing. To the extent possible, the VfM Team examined cost categories, fund utilisation and identified a number of unit costs at the efficiency level among the FTIs. In some cases, due to double counting of beneficiaries, and in some cases due to lack of data, these results and costs are presented with caveats. An internal comparison of projects in a sector, or where possible across sectors, was made. Some of the sectors performed better in the categories examined. A selection of unit costs that emerged was presented above, in Table 3 of Section 3.2 above.

Regarding effectiveness of DFID's support to the CRGE, the benefits that have been incurred can be categorised in the four categories below. However, the VfM Team were unable to monetise these for the following reasons: for some of these, such as improved organisational capacity or learning, it was not possible to monetise the magnitude of the benefit. For others such as employment creation, incidence of the benefit is not known definitively. Adaptation related benefits (measured such as reductions in GHG emissions) are not yet being measured systematically.

- Improved organisational capacity at the CRGE Facility, with systems established. An important source of evidence for this is the accreditation of the Facility for direct access to GCF.
- Learning, through engagement with FTIs, with respect to CRGE mainstreaming across the selected sectors.
- Climate adaptation related benefits (such as reduced GHG emissions).
- Development co-benefits to FTI beneficiaries (such as increased income through asset transfers and employment creation).

The most significant outcome of DFID's support to the CRGE was possibly the institutionalisation and mainstreaming related benefits to the sectors involved, as well as to the Facility. It is not possible to monetise the value of this support. However considering other development benefits from the FTIs regarding employment creation, enhanced household assets and incomes, if sustained, these benefits have the potential to exceed the cost of DFID's investment and hence provide good value for money.

To answer the review's main VfM question of whether the outcomes achieved were commensurate with the funds spent, **we conclude that it was highly likely that there was**

value for money for DFID's investment. More evidence is needed for a more definitive judgment to be made in the future.

5.1 Recommendations

Based on the experience from the first round of CRGE FTIs, the following recommendations are made in order to improve the cost effectiveness of CRGE projects in the future.

Improving cost effectiveness comes either from enhancing the benefits or by extension the effectiveness of the projects and/or reducing costs:

- **Involving the private sector more in projects.** In the next round of CRGE projects, care should be taken not to 'crowd out' the private sector in some interventions, and to actively seek linkages with and inclusion of the private sector. For example, in the case of energy efficient cookstoves in Somali, it was essential to provide the beneficiaries (who make the stoves) the linkages to the markets in order for them to succeed. 'Low hanging fruits' in CRGE priority sub-sectors should be picked, such as trading and servicing of solar lamps, solar panels, solar water pumps; retail of LED lamps; production and sale of biomass fuel, energy saving cook-stoves etc.¹⁴ This will help ensure sustainability of project outcomes.
- **Better cost forecasting and procurement planning:** Frequent under-estimating of project (unit and component) costs was a challenge observed across the board. For example, in Somali, the Bureau of Urban Development had budgeted ETB 10,000 for each garbage container they wanted to procure. However the actual price was ETB 45,000, which meant that they could only buy fewer than planned. 200,000 ETB was budgeted for a tractor but it actually cost four times that amount. These are examples of under-estimating costs, which occurred across all sectors and for many of their FTIs. The sectors would have benefited from additional time to undertake more thorough planning, design and budgeting during the first round. In particular, for the next phase of CRGE projects, adequate time should be allowed for better planning of budgets, among other design activities.
- **Addressing causes of delays in transfer of funds:** This was mentioned as a challenge by many key informants in the regions. According to one key informant in Somali, some of the project activities were not carried out in a timely manner due to the delays in the transfer of funds. The field meetings noted: *'The system of fund transfer is inefficient since all woredas (in a region) receive funds simultaneously: when there is a time lag due to tardy woredas who do not submit their performance/financial*

¹⁴ Anthony Annan, Private Sector Strategy for Ethiopia's CRGE, November 2015, p.40.

reports in a timely manner, the more efficient woredas do not get funds unless all woredas have submitted their reports'.

- **Beneficiary identification issues.** Community-based targeting and selection by woreda committee officials are the most commonly used methods for beneficiary identification. Despite thorough inquiry by the Review Team on this issue, it was not possible to get an articulate and detailed account of how targeting and selection of beneficiaries was actually done and many targeting strategies did not appear to clearly target vulnerable groups. For example, in Somali there were some kebeles selected simply because there were no other development programmes in that area. In the next phase of projects, selection criteria and processes should be more explicitly defined. It is also important to feed beneficiary concerns and suggestions into the design and monitoring of projects, and this should be given consideration by the future CRGE projects.
- **Safeguards:** The implementation of the CRGE interventions may generate adverse environmental and social impacts. Many of the first round of CRGE projects commenced implementation without an adequate safeguards assessment. The future projects will need to be vetted using the Environmental and Social Safeguards Framework (ESSF). A recently recruited technical officer in charge of safeguards issues at the CRGE Facility is an important step going forward. The framework that was agreed addresses mechanisms for public consultation and disclosure of project documents, as well as redress of possible grievances, if needed, during project implementation.
- **VfM reporting and calculations:** The sectors are encouraged to study the VfM analyses provided in this review, and take consideration of VfM reporting in project design and monitoring. Increased understanding on costs of delivery would enable better planning of project targets *vis a vis* scale, depth and affordability, as well as increased financial transparency.

Annex 1: Sector Analysis

Sector analyses are provided below in alphabetical order.

A1.1 Ministry of Agriculture and Natural Resources (MOANR)

In the VfM analysis, in proportion with the high levels of funding it has received, and the level of information availability, we looked closely at the MoANR's projects.

MOANR received the biggest share of CRGE FTI funds, ETB 129,219,667 (£4.1m¹⁵). Agriculture FTIs had the following three themes:

- Extending climate smart agriculture in 8 regions (FTIs directly implemented by MOANR, its regions and woredas).
- Developing climate smart M&E (implemented by Echnoserve Consulting company).
- Rehabilitating landscapes in the Rift Valley (Climate Change Forum Ethiopia).

A1.1.1 Economy

- MOANR's own documentation shows that the total received is ETB 131.6m.¹⁶ This is different from what was reported by the CRGE Facility, ETB129.2m. It is unclear at this stage where the difference is coming from.
- MOANR engaged a private contractor (Echnoserve) to provide technical support for investment planning, M&E and MRV across the whole and contracted an Ethiopian NGO (CCF-E) to implement FTI activities in one woreda. Echnoserve had an allocation of ETB 9,623,660 (£336k¹⁷) and CCF-E had ETB 4,438,335 (£155k)¹⁸. MOANR's own share for implementation was ETB 116.8m.
- It was explained by MOANR that out of the above allocation, 8% was budgeted for federal supervision and M&E costs; 11% was for regional supervision and M&E costs,

¹⁵ As at December 2014.

¹⁶ MOANR recently received an additional ETB 10m from the CRGE Facility, however we didn't reflect these in our costs. MOANR told the review team that ETB 1m was given to CCF-E, and the remaining 9m was allocated to 22 woredas 'to complete seasonal activities'.

¹⁷ As at mid July 2016.

¹⁸ As at mid July 2016.

and the remaining 81% was for woredas which was the level where actual implementation of the FTIs was carried out.

- MOANR asked the regions and woredas that the allocation for implementation be utilised as follows: 30% to be used for livestock; 30% for crops; 20% for natural resource management activities; 15% for livelihoods and resilience improvement, and 5% for overhead costs such as per diem, fuel and stationary of the implementing woredas and kebeles. It is not evident how much this was adhered to by the regions, as breakdown of component expenditure was not available¹⁹. In both Amhara and Somali Regions, this guidance by the federal counterparts was mentioned in Key Informant Interviews.
- In the CCF-E statement of expenditure, the biggest cost item was 'permanent staff salaries' (26%), followed by 'soil and stone bund construction' (22%); agricultural and forestry inputs (22%), and training (10%). Since Echnoserve's work was mostly delivered through technical assistance modality, staff costs were the biggest cost driver at 40%. This was followed by transport fees (11.6%) and per diem for travel (11%).
- Most of the procurement under MOANR FTIs was national and local, following Government of Ethiopia regulations on public procurement. Examples of these were provided to the review team at the woreda level visits. International procurement route was used for purchasing 22 laptops, 26 motorcycles and GPS devices, organised through the CRGE Facility and using the UN system. This has not been finalised at the time of writing. The items procured will be given to the regional and woreda offices of the MOANR to use in their ongoing work.

A1.1.2 Efficiency

- As of end April 2016, MOANR had utilised 96% of its federal allocation, 97% of the regional allocation and 74% of the woredas –implementation- funds. As we understand, these figures do not include the additional funding. MOANR is planning to utilise the remaining funds and the additional funding by December 2016.
- FTIs were implemented in 26 woredas across 10 regions²⁰. CCF-E only worked in one woreda in Oromia region. Echnoserve worked in all woredas for implementation of their technical assistance component.

¹⁹ Based on the Jigjiga woreda figures provided below, a rough breakdown can be discerned however this was only for 12 months and not covering the whole duration of the project. As far as we could understand, around 21% was allocated to crops, 32% was spent on natural resource management and over 35% for livestock, however this latter may have included part of livelihoods component too.

²⁰ Two of them, Somali and Afar were supported by the Austrian Development Agency.

- 53,280 beneficiary households were reported by MOANR²¹ however we could not verify this figure. Going by individual region reports and figures, the direct beneficiaries are much lower: for instance Somali around 500, Amhara 510, as discussed below. Adding these regions up, the household reach figures should be lower.
- At the time of compiling this report, as a result of further clarifications from MOANR, the review team concluded that between 2,640 and 3,300 households were reached. If household members are included, using the multiplier of 5.2 (as per 2005 DHS survey) then, approximately 17,160 people are likely to have been reached.
- Cost per beneficiary household was found to be high in the woredas and regions studied as part of this review. This is discussed in detail below.
- Among the FTI recipient sectors, most comprehensive reporting of project activities and finances was done by MOANR. They encouraged the regions to report on similar content and formats, although there were still gaps and inconsistencies noted by the review team, as indicated below in examples.

A1.1.3 Emerging Unit Costs and Benchmarking Across MOANR FTIs

Somali Region Agriculture Project

Economy

- The project is implemented in 2 woredas and in those, 2 kebeles each. One is Jigjiga Woreda and the other Awubere woreda. Somali and Afar regions allocation was funded by Austrian Development Agency. The reporting from the Bureau is based on Somali and Afar regions together (supported by Austrian Development Agency), however the review team also managed to obtain information concerning Somali only.
- The total allocation for Somali is ETB 7.66m (£245k²²). The Bureau of Agriculture was allocated 11% of this amount for supervision and M&E functions.
- According to a breakdown provided by the Somali Bureau, the expenditure categories of the agriculture project are presented in Table 5 below. This is a high level breakdown, as it includes the region's supervision allocation, and all

²¹ FTIs: End of project workshop presentation by MOANR, slide 7, 19 April 2016.

²² As at December 2014.

interventions undertaken by the 2 woredas. It is also a good example of what kind of financial data was often available for FTIs.

Table 5. Breakdown of Somali agriculture projects allocation

Accounts code	Description	Total spend (ETB):
6115	Daily labour	388,000.00
6217	Fuel expenses	14,552.04
6221	Agricultural inputs	5,133,916.96
6231	Per diems	536,446.00
6232	Transport costs	128,045.00
6255	Loading and unloading	152,500.00
6271	Local training	1,307,466.00
	Total	7,660,896.00

Source: Compiled by the review team from a statement made available in hard copy.

- Examining the breakdown, we see that the agricultural inputs was the biggest cost driver in this project (67% of all costs). Secondly, 'local training' was another key cost driver (17%). These were followed by the per diems category which included the allowances to staff involved in the project for M&E related activities.
- When we visited the woreda finance office in Jigjiga, we were able to get other detailed cost information. The caveat was that this was not covering the whole duration of the project (18 months), but was for 12 months. This can still help in understanding some of the component costs, for instance watershed management (because no costs related to this were incurred in the first 6 months). This information is presented inclusive of costs such as manual labour, fuel, transport, etc.
- We were not able to get information as below form any other woreda/ region on agriculture projects. Even in this woreda, it was available covering 12 months and not the entire duration of the project, as explained above.

Table 6. Costs by intervention/ Jigjiga woreda

Activity	Sub-total costs	Percentage
Crop production	229,088.00	19.5%
Livestock production	156,650.00	13%
Water harvesting	105,700.00	9%
Poultry production	152,300.00	12.9%
Gully treatment	33,812.00	2.8%
Watershed management	74,400.00	6.3%
Compost preparation	21,200.00	1.7%
Nursery production	85,480.00	7.2%
2nd watershed management	164,400.00	14%
Restocking programme	110,000.00	9.3%
Forage seed purchase	22,300.00	1.8%
Operational cost	15,750.00	1.2%
total	1,171,080.00	

Source: compiled by the review team from a statement made available in hard copy.

Harari Agricultural Project

Economy

- Below in Table 7 is the financial information on expenditure breakdown from the Harari agricultural project. The information in MOANR reporting showed an allocation of ETB 5m for Harari, but the figures provided by the region at field visit shows around ETB 3.8m. of allocation. It might be that the difference was expenditure incurred in 2014, as the below table was compiled from 2015-2016 data (until April 2016).
- According to this information, freight, per diems and machinery and equipment were the key cost drivers.
- Presented this way, the information does not lend itself to calculations of VfM metrics, except the overall cost per beneficiary (household), which is presented below under Efficiency section. There are beneficiary figures, hectares coverage, and other results in the progress report, however we have no information on how the costs

below correspond to those results. This was common across many of the regions and woredas' financial reporting.

Table 7. Harari Agriculture Project Expenditure Information

Item	Sub-total costs	Percentage
Office supplies	46,454.00	1.2%
Printing	900.00	<1%
Fuel and lubricants	179,429.00	4.7%
Other naturals and supplies	187,212.00	4.9%
Miscellaneous equipment	149,408.00	3.9%
Forestry and marine inputs	307,066.00	8.1%
Vet supplies and drugs	58,000.00	1.5%
Per diems	692,006.00	18.4%
Entertainment	1,035.00	0
Car maintenance	21,191.00	<1%
Maintenance	32,592.00	<1%
Contracted professional services	8,500.00	<1%
Freight	695,385.00	18.5%
Fees and charges	1,500.00	<1%
Local training	323,866.00	8.6%
Machinery and equipment	578,788.00	15.3%
Transporting animals	470,775.00	12.5%
Total	3,754,107	

Source: Compiled by the review team from a statement made available in hard copy.

Efficiency:

- Harari region contributed ETB 2m (£70k) of their own funds to the implementation of the agricultural project. This is significant, given that the total agricultural FTI funding for the region was ETB 5m.

Cost per beneficiary:

- Using the beneficiary figures reported, total cost per beneficiary can be calculated based on total expenditure (or total available budget). For instance, 465 households were reported as the total number of beneficiaries for Somali region. This would mean around ETB 16,475 (**£575) per beneficiary household.**
- For comparison, the Rift Valley Ecosystem FTI project implemented by Climate Change Forum Ethiopia was also reviewed. Here the cost per beneficiary household was about **£415**²³. This is also high considering the time period over which the project was implemented and that far fewer inputs were distributed in comparison to Amhara Region. However, it remains lower than costs in Somali.
- Harari region reported 1,097 beneficiaries. From the details of the final report, this figure is understood to be the number of individuals and not households. The field team notes reveal that there were overlaps in reporting where both husband and wives from the same household were counted. This translates to around £150 per beneficiary (individual)²⁴. All the other regions and woredas have reported on household basis).
- Amhara region total actual funding amounted to £470k, and the reach was reported as 510 households in 4 woredas. Therefore **cost per beneficiary household is £920**. Total costs also include training of over 1,000 individuals, however many of those are Government officials or members of the same households who also received the asset transfers.
- One woreda in Amhara, Enbesie Sarmidre was allocated ETB 4,200,255 (£147,250) from the sector, and this was all utilised. 160 households were reached based on MOANR reporting, bringing the cost per beneficiary household to **£920**.

²³ \$234k total cost reported, and 425 HHs reached.

²⁴ Harari's funding allocation was ETB 5,005,661 (£160k). MOANR reports show that all of Harari's funding was utilised, although the previous table of expenditure statement shows less utilisation. We think that the table was possibly for an earlier spend period or had not been updated. We used the federal data this time.

- Awubare woreda in Somali region also used around ETB 3m (£104k) of allocation and reached 100 households (as per field notes of the review team). This means around **£1,000 cost per household**.

Table 8. Cost per beneficiary household comparison across regions and woredas

FTI/ region	Cost per beneficiary household
Somali region	£575
Rift Valley ecosystems	£415
Amhara	£920
Enbessie Sarmidre woreda (Amhara)	£981
Awubare woreda (Somali)	£1,000

Source: Compiled by the author

Cost per Geomembrane Pond:

- It is understood that there are two geomembrane ponds funded under this FTI in Somali region. To calculate the cost per each pond, we could use the watershed management related costs as advised by the Bureau staff²⁵. This would mean **ETB 119,400 (£4,167)** for each geomembrane pond. This could be compared with the FTI projects elsewhere, for example, in Enbesie Sarmidre woreda (Amhara) 4 such ponds were constructed under the FTI, however the financial data provided does not allow us to identify costs (total or unit) of these. Information from other woredas and regions from the review team's field notes did not include calculations on the cost of ponds.
- Further, a hard copy document that was given to the review team, which details a number of unit costs to be used by MOANR²⁶ shows that the cost of a geomembrane pond was estimated at ETB 9,500 (£330) each, with the motor pump an additional **ETB 25,000 (£873)**. This makes around **ETB34,500 (£1,205)** per pond, which is much lower than the above figure reached, based on Jiggiga woreda figures. This may be because other activities that go under watershed management and land/ water conservation are also included in this component in the Jiggiga woreda information.

²⁵ We ignore the operational costs which are not significant in this case, or we can spread it equally on each of the interventions listed.

²⁶ Proposed unit costs for the additional budget made available from the CRGE Facility to MOANR.

In other words, the watershed management included the ponds, but not only those and other related activities/ items, which make it challenging to come up with their actual unit costs. It is also unclear whether the pond unit cost at MOANR estimates included labour costs.

- To summarise we cannot calculate the actual cost per geomembrane ponds due to data limitations.
- The ponds included a fuel-based motor pump. The fuel used for the pump was being provided from the FTI funds, as the field visit confirmed. However this is unlikely to be sustainable going forward, as the beneficiaries may not be able to afford the fuel required to operate the pump.

Cost per Watershed Management Beneficiary:

- It was reported that 76 households benefitted from watershed management activities in Jigjiga woreda (Somali), which makes ETB 4,532 (£160) per beneficiary household²⁷. Unfortunately, the hectareage covered by these activities is not available in the MOANR reports, or the field reports. In Amhara, two woredas have the hectareage information, but not the number of beneficiaries, or the cost of watershed management intervention. This makes it impossible to find a comparison for the above metric.
- **In order to understand the effectiveness of this intervention and make a comparison against the cost per beneficiary** we examined the following: In Echnoserve project completion reports for the regions, Amhara region report indicated that, based on a panel survey of households among FTI beneficiaries, it was found that watershed management activities helped increase water consumption of households (with availability of water), as well as creating temporary jobs for them in building of trenches, check dams, terracing, etc. Taking these into account, and assuming similar result for the Somali region, it is possible that there were benefits around and above this magnitude per beneficiary from watershed management activities.²⁸ However there are questions about the relevance of watershed activities for flat terrain in the Somali woredas and no evidence from the field visits that relevant and successful rangeland management activities are in place. Therefore the

²⁷ Based on ETB344,500 that was spent on watershed management and harvesting in that woreda. It was unusual that the woreda had actually compiled costs based on their main interventions/ project components. This was helpful in producing a lot of the Somali related metrics presented in the report.

²⁸ Based on time saved from fetching water, or health benefits from improved availability of water, and finally on improved yields on crops from irrigation opportunities.

main benefits may be assumed to come from the wages paid to labourers engaged in these activities, which were paid at GoE rates of ETB 150 per day.

Cost per Poultry Beneficiary:

- We could calculate this metric using the beneficiary figures for those project interventions and the detailed finance data collected at woreda level by the review team during field visits.
- Based on the Jigjiga woreda finance data, which was available on project component costs²⁹, cost per poultry beneficiary was over ETB 10k (**£370) per beneficiary**, based on 14 beneficiaries (organised in 2 groups of women). Considering each group of seven women shared ~25 chickens, this is high in comparison to the figures for Amhara where each individual received the same number of chickens as the group.
- In comparison, in Lay Gayint woreda in Amhara, cost per poultry beneficiary was calculated as ETB 1,896 (**£67**), based on 28 beneficiaries. This is much lower than in Jigjiga/ Somali. Some of the difference comes from the fact that in Lay Gayint, chicken coops were not provided and only chicks were bought and transferred to the beneficiaries. In Jigjiga, the beneficiaries were also provided with the coop materials. The difference is still wide however, and requires clarification from project implementers.
- The cost data here does not include the government contribution to the project such as staff costs, and when these are included, cost is higher. For example, in Lay Gayint, an estimated ETB 113,400 of staff time, divided equally among 6 project components and added on those costs would mean ETB 2,310 (**£82**) per poultry beneficiary, still much lower than in Jigjiga woreda.
- Information collected and analysed from Enebsie Sarmidre woreda (Amhara) agricultural project shows that cost per poultry beneficiary was ETB 1,434 and **£50**³⁰. This is the lowest cost of all those reviewed and project beneficiaries who had received modern feeders and wire mesh for construction of chicken coops were visited.
- We also wanted to compare these to CCF-E results in their project woreda in Oromia, as this would show costs under a different implementation modality. However the detailed expenditure statement is based on government account codes, and the expenditure is grouped based on per diems, training, fuel, etc and not lending itself

²⁹ Based on one year's expenditure information. The information concerning first 6 months of the project was not available.

³⁰ based on 63 beneficiary households, and ETB 90k costs calculated for this intervention by the field team.

to producing output based calculations. Poultry distribution was not part of their original intervention, however it was proposed under the additional ETB 1m funding that this NGO will receive from MOANR, as part of the extra funding from the CRGE Facility.

- **In order to understand whether poultry beneficiaries are likely to receive benefits at and around the output costs presented above, we looked at the following:**
- During a focused group discussion in Somali region with female poultry beneficiaries, we found that there were 2 groups of 7 women each (14 beneficiaries total). They earned ETB 150 in 2 days, and deducting the feed and other related costs, their profit came to about ETB 60 per day, among 7 of them. This would mean an earning of only around ETB 8 per woman beneficiary per day and ETB 2,920 per year, assuming they continue work and earn the same way every day.
- Another experience from a poultry beneficiary in Amhara³¹: 'He has received 25 day-old poultry chickens from the project. Average egg yields 19 per day, 570 egg per month and 3420 egg for 6 months. Average income from selling of eggs within 6 month was ETB 8,550. Net income of ETB 6,450 from selling eggs' (understood to be for 6 months). This intervention appears more profitable, and likely to recover the initial costs sooner and have more extensive benefits to the individual receiving it. Given poultry was provided on a revolving fund basis in Amhara Region, this indicates there is scope to repay the loan and for the intervention to be extended to new households.

Cost per Hectare Under Watershed Management:

- Information from demonstration pilots on climate smart watershed management, implemented under SCIP programme, shows that the cost per hectare under watershed management was **£120 per hectare**, based on 270 hectares covered. For benchmarking purposes, we looked at one of the Somali region projects (Jiggiga woreda) which featured component costs for watershed management and water harvesting at ETB 344,500 (£12,241). However, we couldn't find the hectareage covered in that project in the documentation provided. Similarly we looked at Enebsie Sarmider woreda (Amhara), however the review team calculations at the field did not include this intervention, and MOANR reporting on this particular item in that woreda was not available.

³¹ MOANR Amhara Region Final report, p.23. The beneficiary testimony was adjusted for clarity.

- Based on the percentage of natural resource management activities coverage recommended by MOANR to the regions (20%) we can propose an estimate, using the 20% of the Enebsie funding³². The woreda reports that 40.75 hectares were covered³³ under improved watershed management and this gives £504, much higher than the SCIP example.

Other Unit Costs (economy and efficiency)

- Some other unit costs are specified in Awbere agricultural project finance data. One is the **cost per rehabilitated irrigation wells** (ETB 18,900 or £660). We could not find a comparator project data for this metric. The second unit cost by Awbere woreda (Somali) was the **cost of modern beehive** (ETB 3,000 or £104). The latter was calculated as ETB 1,700 (£60) in the Lay Gayint (Amhara) woreda. It is not clear where the difference is coming from. It might have been from the difference in transport costs, however we don't know for certain.
- **Caution is advised for the cost per beneficiary figures presented in the agriculture sector projects.** This is because one household can be a beneficiary of many interventions (poultry, crops, beekeeping, watershed management, etc) and members of the same household are recipients of different interventions. There is overlapping counting in many cases which appear unavoidable.
- Cost per beneficiary figures will be even higher considering the government contribution (which was monetised based on estimates in some instances) and the time invested by the beneficiaries themselves. The latter was not monetised in reviewing these FTIs, however one example from MEFC projects in Amhara reported that the labour force that was used to treat the degraded lands was contributed by the local communities for free. Total number of person days contributed were 684,627 which was equivalent to \$850k³⁴. The number of days here appears very high, according to the review team.

A1.1.4 Effectiveness

- Some of the discussion regarding effectiveness of various interventions were held under the respective output metrics (watershed management, poultry) above.

³² ETB 3,370,515 (£118k).

³³ The break down is as follows: 23.5 ha farm land; 12.5 ha hillside; 4.5ha by area closure; 0.25 ha gully.

³⁴ MEFC portfolio analysis spreadsheet, prepared by the evaluation team. Reporting comes from the MEFC.

Agriculture 'package' of transfer to households

- MOANR FTI projects have provided a 'package' of different interventions to households in the woredas they have operated. This package was essentially an asset transfer comprising livestock (sheep, goats, heifers, poultry, bees), various crops and seeds of improved variety, and sometimes agricultural equipment and tools (hand-held tractors, etc). In addition, households could benefit from natural resource management, as well as provide paid labour to various works undertaken as part of the projects. In most cases, the interventions would be tailored for men and women, such as poultry and bees for women, and goats, sheep, heifer for men.
- Below is an example of agriculture 'package' of benefits given to one household, Table 9. It shows the transferred items list from Amhara. It is helpful in understanding the high costs per household incurred by the Ministry of Agriculture FTIs, as shown above.
- This list has not been uniform in each region, and for example Gambella and Harari provided a much smaller scale of these items. The Harari list was also included below, in Table 10. Also, the watershed management related costs are not included, as they constitute a different type of transfer, however would still be factored in the cost per beneficiary household overall.
- In Harari, households were paid to complete soil and water structures on their own farms. Payments of 1,000 ETB for each 100m of soil bund were paid which was not the case in other woredas where SWC on farmers' own land was considered their own responsibility and was done freely.
- In Amhara, agricultural inputs were provided to households with the expectation that they have taken a loan to be repaid via the Farmers' Cooperative. In Somali and Harari, all inputs were provided freely with no expectation of repayment. In Amhara, the revolving fund approach had not exposed households to new risks since households whose livestock died or crops failed were not required to repay. However, neither had it taken account of learning from the *Other Food Security Programmes* (the precursor to the Household Asset Building Programme of the PSNP), where farmer cooperatives had lower interest rates but also lower repayment rates³⁵ relative to microfinance institutions which were later used for managing rural finance.

³⁵ A key informant reported rates of ~50% when managed through cooperatives and ~85% through MFIs and RuSACCos because of proper follow up and procedures. In addition, because of the interest rates in RuSACCOS and MFIs account for non-payment, they can continue to offer loans without re-capitalisation.

Table 9. Items Provided to Households in Amhara FTIs

Items given	Quantity/ amount	Estimated unit costs (ETB)	Total cost per item (ETB)
Wheat (improved variety)	50-100 kg		
Maize	1-6 kg		
Beans	200 kg		
Barley	100 kg		
Teff	5-10 kg		
Potatoes	200 kg		
Onions	200 kg		
Beet root			
Cabbage			
Apple		44	44
UREA	50-100 kg		
DAP	50-100 kg		
Forage seeds	2 kg		
Tree seeds	20-200		
Poultry	24	55	1,320
Sheep	6	700	4,200
Heifer	1	20,000 ³⁶	20,000
Modern beehive	3-8	550	2,750

Source: Adapted and re-organised using Echnoserve Post-Project Report for Amhara, p.9. Costs estimates compiled by the review team from field notes.

³⁶ In the MOANR document submitted to CRGE F for additional funding, that shows some some unit costs, improved breed of heifer unit cost is shown as ETB 35,000 which is much higher than our field finding.

- We were unable to fill in the table with all the cost items, although what we have of livestock costs already add up to over **ETB 28k (£1,000)**.
- Harari’s package of agricultural transfers is presented below. This is much smaller in coverage than Amhara’s that was shown above.

Table 10. Harari list of items transferred to households

Items given to each household	Quantity/ amount
Sorghum	4-10 kgs
Maize	4 kgs
Tomato	-
Goats	5
Poultry	5

Source: Re-organised and adapted from the list in Echnoserve Post-Project Completion Report for Harari.

- Based on our review of the documentation, and the field visits, it can be concluded that many households probably did receive many items on the list below. It is also possible that some households did receive all of the items. In Gambella and Harari, the list of items provided were far less extensive. The high costs per beneficiary are understandable in the case of Amhara, and possibly less so in other regions studied (Gambella, Harari, Somali) as they featured a more modest package of transfers. Harari and Somali may have incurred higher operating costs due to remote locations of the regions, however for example in Somali, jigjiga woreda and its kebeles were close to the town center, as the field work of the review team confirmed. Therefore the higher costs need investigation and clarifications by the implementers.
- Trying to understand the level of benefits that can be incurred per household from this type of asset transfer, we examined the following examples from crops and livestock. Field-based beneficiary feedback in Somali indicated that goats and sheep brought an estimated income of ETB 2,000 every 6 months (ETB 4,000 per year, or £140) per beneficiary. The Echnoserve panel survey in Amhara woredas found that average cash income from livestock for a household was around ETB 2,560 (£90). It was not specified over what period of time, but this is what was understood, as they compare 2014 and 2015 findings. Similarly, ETB 2,403 (£84) was reported by beneficiaries in Gambella region woredas. In Amhara, MOANR reported that 213

households earned an estimated \$41,975 from selling their fattened animals, which is around £150 of income per household³⁷.

- In terms of income received by beneficiary households from crops interventions, we can look at the following examples: in Amhara, in one woreda, the panel survey by Echnoserve found that the average household income from wheat production had increased 3-fold, from ETB 8k to 24k (£277-£832). Another woreda reported an increase from ETB 4k to 11k (£138-£381). Taking the lower finding as a conservative estimate, ETB 7,000 (£250) additional income was earned by households from use of improved crops, provided as part of the transfer package. Another example was from improved maize in Gambella region woredas which reportedly amounted to ETB 6,000 (£213) of additional income.
- Adding up potential income from livestock and crops, as shown in examples below, we find that this would break even over 2 or more years per household, depending on the cost of the package they received. It is of course likely that keeping the same level of assets or adding to them over time, and assuming that one household successfully continued both livestock and crops engagement, beyond 2 or 3 years, the interventions can have positive returns for those who incurred the main initial investment costs, in this case the funding donors of the FTIs (in addition to the beneficiaries themselves). This period would be longer in the case of a household being engaged with only livestock, or only crops and of course, loss of assets through a climate shock could reduce these returns substantially. In a longer term programme, these impacts could be explored in tracer studies, by visiting the initial panel survey respondent households.
- Asset transfer can be a good modality for promoting resilience and adaptive capacity but it is potentially challenging to scale up in the current form of transfers, because it is very costly. Further, it can create tensions in communities by widening the wealth gap. A smaller and more focussed set of transfers would be needed if more households were to be reached.

For external benchmarking on cost per beneficiary, we examined the following

- Data to compare cost per beneficiary in two flagship programmes the Sustainable Land Management Programme and the previous phase of Household Asset Building Programme (HABP) were sought to identify a possible benchmark. Whilst there were no major differences in the costs of individual items procured when reviewed in one woreda, there are differences in the overall costs per beneficiary. A similar approach to supporting watershed activities and providing inputs for livelihood activities is

³⁷ MOANR FTI Final Report for Amhara Region, p.16.

followed under the Sustainable Land Management Programme. The cost per beneficiary is within the range of FTI woredas, despite the fact that expenditure was for over 3 years, and covered a larger area of rehabilitated land. Assuming there is no loss as a result of death of livestock or total crop loss, the benefits to those individual households benefitted through SLMP or FTIs can be substantial, but there is insufficient data to know whether those benefits will be sustained in future.

- In the Household Asset Building Programme (HABP), the original loan capital had already been provided so the costs reported relate only to the development of business plans and facilitation of linkage with loan providers. This resulted in a very low cost per beneficiary reached of £1.22. Whilst it is acknowledged that the impact of a loan for a group business is also likely to be far less than the transfer of a variety of productive assets to individual households, it is interesting to see how a model which relies more heavily on private management of revolving funds could result in extremely low per individual costs over a number of years.

Table 11: Benchmarking with other MOANR programmes

	Expenditure	Results	Cost per result
SLMP (2012-15)	ETB 481,408,943.58 (assumed 60% spent on NRM / 40% on livelihoods)	10,823 beneficiaries 209,926 hectares	· ETB44,480 /£1,589 per beneficiary (100%) · ETB 17,792/ £ 635 per beneficiary (40%) · ETB1,376/ £ 49 per Hectare (60%)
HABP (2012/3-2015/6)	ETB 44,315,661 ~ £1,537,275	1,253,043 beneficiaries	ETB 34 / £1.22 per beneficiary

Source: SLM 1 PCR Final Report; HABP interview with finance and programme staff.

Other benefits

- Echnoserve’s panel survey demonstrated improvements in productivity, incomes and water availability for the majority of households covered by pre- and post-project assessments in Amhara, Harari and Gambella. Similar assessments will be available for other Regions in future.
- Mitigation benefits through increased biomass, soil carbon or reduction in livestock numbers cannot be verified during the short lifetime of the FTI projects. However, the mitigation case for soil and water conservation is stronger than that for livestock and crop production.

A1.1.5 Conclusion

MOANR projects featured relevant climate smart design elements and interventions. By involving a private sector contractor and an NGO, MOANR diversified in terms of modalities in the implementation of their FTIs. Fund utilisation amounted to around 90% overall, higher in federal and regional supervision allocations but lower in woreda implementation. MOANR set guidance for their regions in terms of budget allocations to project components such as livestock, crops, natural resource management and livelihoods. Their reporting on costs and results was the most comprehensive of all among the FTI recipient sectors. We were able to understand some of the benefits incurred by the beneficiaries thanks to panel surveys conducted in several regions. This was not done by any other sector.

On the other hand, unit costs at output levels³⁸, such as the cost of package of transfers are high, and potentially not likely to be scaled up at the current format. It is likely that significant benefits were delivered to the beneficiaries, however more evidence would be needed to conclude definitively whether these would amount to higher than the costs incurred and how sustainable they are.

³⁸ Presented with some caveats due to potential double counting.

A1.2 Ministry of Environment, Forestry and Climate Change (MEFCC)

MEFCC was allocated ETB 77.5m (around £2.7m) according to CRGE Facility figures, and have been implementing at least 12 projects across many of the regions. According to MEFCC financial records, there are around 10 sub-projects in Amhara.

The projects and their levels of funding (as per information shared in July 2016) are shown in table below.

Table 12. MEFCC FTI Projects

Project Name	Budget
Mount JemoWechecha Ecosystem Rehabilitation in Addis Ababa	\$159,982
Prosopis Juliflora Cement Project in Afar	\$1,185,200
Reducing Land Degradation and Improving Livelihoods in the Highlands of Amhara	\$814,477
Bamboo Forest Management in Benishangule Gumz	\$69,399
Participatory Forest Management in Dire Dawa	\$56,100
Improving Livelihoods of Women Groups in Harari	\$ 41,451
Promotion of Highland Bamboo Plantation in Upper Rift Valley Areas in Oromia	\$430,886
Enhancing Highland Bamboo Management and Processing and Improving Livelihood of the Community in Oromia Region	\$470,500
Natural Resource Rehabilitation and Conservation in Selected SNNPR Woredas	\$684,990
Afforestation/Reforestation project in Somali Region	\$78,360
Integrated Approach to Combating Forest and Land Degradation Induced by Charcoal Production and Firewood Collection in Somali	\$912,670
Integrated Forest Development & Management Project in Selected Woredas of Tigray Regional State	\$390,385
Total	\$4,473,000

Source: Compiled by the Review using MEFCC reports

A1.2.1 Economy

- A financial summary report covering the MEFCC projects³⁹ report that the total advance given to date was ETB 69.5m (£2.22m). It may be that the difference between this and the Facility figure is the extra funding this sector received in June 2016.

³⁹ Dated 20 May 2016, hard copy format.

- Federal supervision and M&E costs⁴⁰ appear to be 4% of the total sector allocation, which is the lowest of any sector that received CRGE FTI funding.
- Among the regional allocations, Oromia received the most funds when allocations to the Region Forest Enterprise and to the “Oromia Forest and Wildlife” are combined – this is around ETB 17.4m. Following that, Amhara region received the highest share at ETB 17m. This is followed by ‘SNNPRS’ at ETB 12.4m.
- Wage payments for manual labour in tree nurseries and tree planting activities and agricultural inputs were the major cost drivers among the sector FTIs.

A1.2.2 Efficiency

- Out of the 69.5m, 94% of this amount was utilised. CRGE Facility reports that 84% of this amount was utilised, which is presumably based on the 77.5m allocation.
- Budget utilisation across the regions (including the federal allocation) varies between 51% (Benishangul, the lowest utilisation) and 100% (Somali, Tigray and Oromia).

A1.2.3 Emerging Unit Costs, Benchmarking of MEFC Projects

Economy:

- Total budget for two projects implemented by the Jigjiga Bureau amounted to ETB 2,922,356 (£101k), and this was fully utilised.
- 45% of project 1, and 49% of project 2 in Somali were payments for manual labour. This was followed by agricultural equipment costs (36%). Also, 15% of the budget in Somali was allocated for the Bureau’s M&E and supervision functions. In comparison, in Lay Gayint project in Amhara M&E and supervision costs amounted to around 18% of the costs. By comparison, these are higher than the federal level allocation for MEFC for supervision costs (4%).

Efficiency:

- Based on a total of 2,245 beneficiaries reported from two projects in Somali region (1,500 of those cookstove recipients in Kabribeya woreda), cost per overall beneficiary

⁴⁰ In the same hard copy document mentioned above, among the listed projects there is a ‘MEFC’ line item, which we interpret as the federal allocation.

is ETB 1,300 (**£45**). Comparing these to Amhara projects, we find that in Lay Gayint cost per each beneficiary is **£148**, based on 355 beneficiaries, and for Enebsie Sarmidar project (Amhara) based on 573 beneficiaries, cost per beneficiary comes to ETB 2,552 (**£89**).

- Another comparison could be the Oromia projects. A total of 1,340 beneficiaries were reported. Based on total funding of \$390,385, cost per beneficiary comes to \$291 (**£224**). Those projects comprise of interventions such as bamboo plantation, bamboo market access, and bamboo research support. Therefore it is different from those in Somali, and the higher cost per beneficiary may be resulting from this factor.
- The lower cost in Somali is possibly due to higher beneficiary figures reported, majority of whom (1,500) were recipients of the distributed cookstoves. As explained above, not all interventions across the MEFCC projects are standard and differences might also originate from that.

Table 13. Cost per beneficiary comparison of MEFCC projects

MEFCC Project	Cost per beneficiary
Somali	£45
Lay Gayint	£148
Enbessie Sarmidre	£89
Oromia	£224

Source: compiled by the review

Cookstoves:

- The sale value of the cookstoves (made through the Somali project) at the market was reportedly around **ETB 200**. This was an estimate proposed, following a long discussion with the FTI team in the Bureau in Somali. They were uncertain as to how much a cookstove, built by project beneficiaries, amounted to. Calculating unit costs of outputs is not common for Government of Ethiopia projects, as explained elsewhere in the report. The review team found, during the field meetings, that a cook stove that was built by the Mercy Corps PRIME project in Somali is sold for ETB 180 in Jigjiga. The PRIME stoves are manufactured in Addis Ababa and transported to Jigjiga. Further, the latter stove uses firewood, and not charcoal.
- Using the budget figures provided (in US\$) by the Somali bureau, building of cookstove production center, stoves production, transportation of stoves and

forming of one cooperative for the stoves amounted to \$18,870. Using this figure and 1,500 stoves amount to around \$12.5 per stove (**ETB 280**).

- The field visit revealed that the cooperative members produced a total of 500 stoves during 3 months, but they are not yet in a position to make more, due to the lack of access to inputs, especially red or clay soils transported from Karamara (about 70 km far from the location) and also because of the lack of sheet metal required to make the stoves. Moreover, there is no direct access to markets since the cook stove value chain is not well developed. There was no adequate work done to develop the market and value chain of cookstove producers organised in the kebele.
- According to the reports by MEFCC, their FTI project in Dire Dawa also distributed 3,300 fuel-efficient cook stoves, however there is no cost information regarding these⁴¹. There is also no information on where these were manufactured, using what materials.
- There were also cookstoves distributed under the MOANR projects however these were done by linking the households to the manufacturers (rather than directly manufacturing of them by the project). Again, we don't have any cost information regarding those cookstoves.

Nursery costs

- Each project of the Somali Bureau of Environment and Forestry aimed to build a nursery, so a total of two nurseries were reportedly built. During the field visits only one nursery was observed. A budget (in US\$) for those projects was provided to the review team. This showed that costs related to the two nurseries amounted to \$20,351. If we add a portion of project management costs⁴², it comes to \$21,723 total and \$10,861 per nursery (£8,388⁴³). These costs appear to include labour, per diems, training and purchasing of materials.
- In MEFCC project in Dire Dawa, 4 nurseries were reportedly established, however this is only one of many interventions under the project, and component costs were not provided. The total budget for that project is \$41k.
- During the field visit in Jigjiga, the review team saw one nursery by the Bureau of Agriculture, almost next to the nursery by the Bureau of Environment and Forestry. It

⁴¹ MEFCC Dire Dawa report, May 2016.

⁴² \$1,372 for each component in that plan, therefore also for the nurseries.

⁴³ As at mid July 2016.

would be interesting to compare the costs of those two, under two different bureaus. Unfortunately, we don't have sufficient data to make this comparison.

Cost per hectare covered in forestry interventions:

- In Somali, in the two forestry projects, 150 ha were targeted to be covered and \$11,538 were budgeted for reforestation. Including a portion of project management costs, we find this to be **\$86 per ha (£65)**. However, the bulk of the seedlings planted died due to poor management of the nursery and were therefore not transplanted.
- By comparison, the review team found that Lay Gayint woreda in Amhara project cost per hectare covered was ETB 4,038 (**£143**), on 126 ha covered. In Enebsie Sarmidre woreda in Amhara, this was a similar ETB 3,892 (**£138**) on 97 ha covered. The cost items involved in these interventions were also similar. Both calculations excluded government contributions in the project.
- Somali costs appear much lower than in Amhara. However, the Somali calculations are based on planned costs and not actuals. Further, the review team found that many of the Somali interventions (for example reforestation related ones) had not progressed as planned, or in some cases not commenced at all.

A1.2.4 Effectiveness

- MEFC used FTI funding through CRGE to engage all Regions in learning about CRGE. The review found that not all Bureaus of the sector are set up yet to work effectively in the forest sector. Some lack overall experience as they are in emerging regions. Some are finding that the Agriculture Bureaus still maintain a key role in forest management and nursery development. Therefore it is important for MEFC to address, particularly in the Regions that are pivotal to implementing the forest sector's role in delivering the CRGE strategy.
- Some regions made effective use of the funds such as Amhara. In this region, the community was successfully engaged to become involved in a Joint Forest management (JFM) programme, despite previous attempts which had failed to secure buy-in. Some other regions failed to deliver sustainable interventions, for example Somali.
- While MEFC has significant emissions reduction targets, the FTI program did not trigger action related to achieving emissions reduction targets.
- FTI involvement was overall beneficial for the sector to encourage bottom up project planning processes involving the regions, designing interventions, and monitoring,

including for example counting and reporting of beneficiaries. However, immediate outcomes could not be achieved in the projects' duration.

A1.2.5 Conclusions

- At sector level, MEFCC recorded higher utilisation of funding (94%). Many of their projects have significant relevance for climate adaptation. Based on reporting and field visits, we were able to compare emerging unit costs at output level from this sector, and the tables showed benchmarking across the FTIs as above. It is recommended that MEFCC study this type of analysis and take into account in planning of their projects and programmes, as it is highly likely that this sector will continue to be a key actor in CRGE in the near future.
- It is not possible to conclude at this stage whether the funding to MEFCC on FTIs overall represented value for money, although a number of individual projects of the sector achieved good results. Better project design and planning, as well as more comprehensive reporting of results from field level will help build the evidence base to enable more conclusive assessments.

A1.3 Ministry of Industry (MOI)

This ministry has implemented one FTI project, titled 'Development of GHG baseline data and MRV System for industry sector'. This resulted in two studies, one titled 'development of GHG baseline data and MRV system for industry sector, and the second one titled 'Pilot Energy Efficiency for GHG reduction'. The total amount allocated was ETB 12.2m or £390k, as per reporting). The expected outcome of the project is that the Ministry will have an accurate baseline data on GHG emissions from the sector, the necessary MRV system in place to monitor GHG emissions reductions as well as trained staff to perform these functions. The energy efficiency study investigated the challenges related to energy efficiency for five sub-sectors (Cement, Textile, Leather, steel & engineering and chemical) through an energy efficiency gap assessment in selected factories, with the aim of demonstrating the impact of efficiency technologies in factories.

A1.3.1 Economy

- There were two bids organised under this project. One for buying the GHG equipment, and the other for implementation of pilot GHG emission reduction in industry.
- Although the total allocation from CRGE Facility was given as \$570k, the total budget available was presented as \$618k in the documentation. We have not been able to reconcile the differences in these figures. According to the financial statement provided by MoI, the expenditure breakdown as per project components are below.

- According to this, installing of the energy efficient systems in the sample industries was the highest cost project component (68%).
- It appears that MoI's supervision and M&E costs are factored in the main project cost components below. Therefore we are uncertain of the level of those costs.

Table 14. Cost categories under MoI allocation

Component	Allocated budget(\$)	Used budget (\$)	% utilisation
Development of baseline and MRV system	97,251	72,938	75%
Newly added factories (for the above)	35,000	'not paid'*	n/a
Purchase of GHG measuring equipment	41,845	41,845	100%
Installing systems in sample industries	422,738	338,190	80%
Total	596,834	452,973	75.8%

Source: Adapted and re-organised from MoI Final Report of FTI, no date.

*as it states in the original table.

A1.3.2 Efficiency

- Most of the project activities are close to completion. According to the CRGE Facility figures, 79% of the total amount allocated has been utilised. As per the Table 14 above, used funds appear to be around 76% of the total available.
- Cost per beneficiary is not a relevant metric for this type of project. Although we can calculate cost per each industry where systems were installed (5 such industries, \$84k), this is unlikely to lend itself to a meaningful benchmarking.

A1.3.3 Effectiveness

- This is potentially a significant project and relevant for CRGE's scope. Measuring GHG emissions is important for each industry and FTI as a pilot instrument with a modest funding has been an appropriate one for the project.

- Assuming the results of the project are used, its effectiveness will be evidenced. However, at present the GHG Measuring Equipment has not been used and the baseline has been calculated using standard emissions factors rather than measurement. MoI also commented that there are limitations to the extent that the factories targeted will implement the measures proposed in the consultancy reports. Whilst MoI personnel report that there is the possibility to use the recommendations for the development of new policy and regulation no progress had been made at the time of the Review.

A1.3.4 Conclusion

This is a relevant project which fit in well with the FTI as a funding instrument. However there is low funding utilisation (76-79%) and we have limited information on economy. A well-informed VfM conclusion can be made once the project is successfully completed.

A1.4 Industrial Parks Development Corporation (IPDC)

The Industrial Parks Development Corporation (IPDC) implemented one FTI with allocation of ETB 10.1m. (£322.9k) The project, 'Greening of Bole Lemi Industrial Zone' is completed. The project aimed to contribute to the ecology of the industrial zone by greening of 10% of its area, around 33 ha.

A1.4.1 Economy

- There is no detailed information on various cost categories of the project. During the review team meeting with IPDC in Addis, a break down of 60% for greenery and 40% for civil works was mentioned.
- The contractor to carry out the works was chosen from 4 bidders.

A1.4.2 Efficiency

- According to a recent CRGE Facility presentation to donors, 96% of the IPDC budget had been settled at the time of writing. However, IPDC final report says 40% of the allocation was utilised. The review team think this was possibly a typo, and the entire allocation was utilised.
- Page 15 of the IPDC final report says:
'Total budget for the project = \$508,000
Transfer made to the Executive Entity (Ethiopian Industry Parks Development Corporation) of the Bole Lemmi Industry Park Greenery project = \$104,750
100% of the total allocated was utilised'.

- It may be that the \$104k was assigned for the IPDC supervision and M&E costs, and this portion was fully utilised. The rest was transferred to the contractor. In this case, federal allocation would be 20% of the total project, higher than the other FTI sectors.
- 740 direct and 8,000 indirect beneficiaries were reported by the project. Direct beneficiaries were those who received temporary employment (up to 4-5 months) during the project in the gardening, greening and civil works (such as drainage structure, walkways, etc). The works were undertaken by a private contractor, under the supervision of Environmental Protection and Social Safeguard department of IPDC. The contractor hired the workers. The indirect beneficiaries were calculated by IPDC using the total number of employees who work in the entities in the industrial park.

A1.4.3 Effectiveness

- It is understood, based on IPDC reporting, that the cost per direct beneficiary equals to the cost per temporary job created, which comes to £480. Cost per ha covered with greenery comes to £5,870.
- 450 of 740 direct beneficiaries were women. The contractor was instructed by IPDC to give priority to women in hiring.
- As a good VfM practice, it was noted that there was a section on VfM in the IPDC final report on this FTI. It talked about Economy, Leveraging, Efficiency and Effectiveness. However, there were no metrics or indicators, but rather physical project achievements (without costs attached) were reported under VfM.
- Beyond the benefits of temporary employment, IPDC suggest that greening the park would contribute to prevention of floods, and provide aesthetic value. There is not enough evidence on the feasibility of the former, and the latter is not a high level benefit.

A1.4.4 Conclusion

There is insufficient information to conclude on the VfM performance of this sector on 4 Es. Particularly at cost drivers and fund utilisation aspects. The funds allocated to IPDC may have been used efficiently however, it is unclear whether greening of industrial parks would be the best use of FTI funds in terms of climate adaptation related action, or development co-benefits.

A1.5 Ministry of Transport

Ministry of Transport have been implementing, in collaboration with Addis Ababa City Administration, two FTIs:

Table 15. MoT project budgets

Project Name	Budget
Cycling/ Share the Road	\$715,000 (£456,187 ⁴⁴)
Smart parking and improvement of traffic flows in Addis Ababa	\$780,000 (£497,658)
Total	\$1,495,000 (£953,845)

Share the Road project is closer to completion. The electric bicycles were procured, the construction of cycle sheds are completed and 3 cooperatives were formed to operate the bicycles initially. These cooperative members are chosen from jobless area dweller youth, however there are currently no women among them.

There is a lack of information on the Smart Parking project in the MoT reports submitted for the review. The meetings held at MoT revealed that the site selection for the smart parking unit was done, and that consultants from Addis Ababa University had been hired to develop guidelines for the public private partnership approach for managing the parking towers.

The total budget in the FTI for parking towers was around ETB13.5m /USD780,000. This is not sufficient to complete construction of even one tower. However, this initiative encouraged GoE to invest their own resources to enable seven parking towers to be constructed. They are therefore not planning to report specifically on FTI utilisation and transferred the funds from the project bank account to their own account so that it could be pooled with the other resources making financial reporting challenging. However, the bulk of the costs from the FTI would be spent on procuring the smart parking towers, but whilst a Chinese Supplier had been selected and an advance payment of ETB18m had been paid, the towers had not yet been delivered. Installation was expected by December 2016.

A1.5.1 Economy

- Based on a general ledger trial balance provided by the Ministry, we can see the cost categories of the Ministry's total FTI allocation (both projects), and infer the key cost drivers of the project. Purchasing of the bicycles were the biggest cost item at 27%, excluding the 'advance to Addis Ababa' item, which is unclear. It is likely to include the costs of lane construction as well as the smart parking related costs. The high cost of 'cleaning' among the cost categories needs probing. Presented this way, project costs are unclear and need clarification. It is further confusing because Table 16 below shows the total cost of share the road project including the government contribution, but this does not help us in understanding the main cost categories covering both projects.

⁴⁴ £ figures as at December 2014.

Table 16. MoT cost categories of spend as at 31 March 2016

Description of spend item	Amount (ETB)
Cash at bank	4,183,678
Advance to Addis Ababa	18,227,999
Contract staff salary	120,000
Pension	12,100
Stationary	10,974
Cleaning	294,828
Miscellaneous equipment	24,250
Per diem	33,623
Contract agreement	16,800
Freight	238,315
Service charge	100
Training	6,925
Cycle purchase	7,087,670
total	30,257,262

Source: reconstructed and re-arranged from a print out provided by the MoT to the review team. ETB figures are rounded up to the nearest digit.

- 'Share the Road' Project cost components and unit costs were shared with the review team. They are shown in the Table 17 below.
- These costs are not easily comparable to benchmarks. For instance on the cost of tricycles and bicycles: these are understood to be based on certain design specifications. Others like park benches are similarly difficult to compare. Cost per trees and seedling as in the table are within the range of such costs across other FTIs (for example in MEFCC projects).
- An expert to work as CRGE coordinator was hired by the Municipality to work only on the FTIs (salary at ETB 10,000 monthly). Over one year duration total cost was ETB 132,100 including the pension contribution.

A1.5.2 Efficiency

- Total allocation for MoT was ETB 28,500,000 as at December 2015. This was increased to ETB 30.2m with extra funding from the Facility. Based on a recent presentation by the CRGE-F to donors, 26% of that latter amount was settled and the remaining is yet to be settled.
- **A total of 311 direct beneficiaries** was reported by the Ministry, and all of them are from the Share the Road project. These reflect new jobs created for the members of bicycle taxi cooperatives. Based only on FTI funding, cost per beneficiary comes to a high **£1,736**. This will be higher considering the additional staff member hired and the government contribution. However, once commuters start using the cycles and lanes, direct and indirect beneficiaries are likely to increase.
- **Cost per km of cycle lane built** (over ETB 3.8m per km/ £121k) could not be benchmarked with a suitable comparator.
- **Cost per smart parking unit designed, supplied and installed** was ETB 9,310,000 (£297,713) as per the Bill of Quantity submitted by the Addis Bureau of Transport). Again, this is challenging to benchmark.
- According to information provided by the Addis Bureau of Transport (table below), cost of one (electric) bicycle was ETB 30,072 and tricycle was ETB 42,320. Electric bikes were imported for the purpose of the project. Each bike owner will take the bike on loan to be repaid over a period of eight years. It is not clear whether electric bikes were needed or whether repair services will be readily available locally.
- A significant share (80%) of the bikeway construction funds came from the municipality (leveraging). ETB 4.5m (20%) came from the FTI allocation. Similarly on smart parking, only ETB 780k (7%) came from FTI and the total cost is ETB 12.7m.

Table 17. *Costs under the Share the Road Project of Ministry of Transport*

Activity	Cost per activity (ETB)	Unit price (ETB)	Remark
1. NMT design manual preparation	292,330	-	Bikeway, and walkway and crossings design guide
2. Cycle parking building	1,154,148.55	384,716.2 ETB per building	Three cycle steel structure building
3. Bikeway construction	23,904,212.73	3,891,468.35 ETB per km	This is an estimate because since the bikeway construction has not been

			completed we don't know the exact cost.
4. Cycle rack and city bench production and installation	1, 141, 375	ETB 4,715 per rack ETB10,695 per city bench	141-racks and 45-city benches all steel structure
5. Tree procurement, digging hole and planting	606,062	60.6	10,000 trees
6. Cycle procurement	7,087,669	42,320-trikes 30,072.5-bikes	57-trikes and 153-bikes

Source: Addis Ababa Bureau of Transport

A1.5.3 Effectiveness

- The smart parking project is at an earlier stage. Site selection for the parking structures is done. The structures are being imported from China, to be installed in the selected sites in Addis. The structure is costly, so much so that FTI funding is insufficient to cover even 1. In other words, less than 1 out of 7 is being funded by the FTI, the remaining is government funds. The MoT officials told the review team that they were unsure as to how to reflect these in financial reports. The advance item in the Table 16 includes this.
- Share the road project has also not been completed, as the bicycle taxis are not operational yet.
- Ministry of Transport projects, by their nature, are often sizeable investments, and therefore small pilots such as FTIs may not have been an appropriate funding instrument for that sector. However, MoT personnel report that the FTIs have created impetus and interest in CRGE and raised awareness of some of the potential interventions which can be included in longer-term plans in future. This has fed into the development of a non-motorised transport strategy and the leverage of additional resources from Government budget for smart parking.
- Using their experience from involvement with CRGE FTIs, the Ministry is participating in the proposal to GCF, with a \$15m allocation for scaled up activities.

A1.5.4 Conclusion

We do not have enough information at this stage to conclude whether the sector allocation has provided value for money. The unit costs that arise do not allow for benchmarking to

comparators. There is low utilisation in one project, and not information on utilisation on the other. Further, some design issues such as under estimation of the smart parking costs, and lack of women and girls' representation in Share the Road project have potentially impacted on effectiveness.

A1.6 Ministry of Urban Development and Housing (MUDH)

MUDH has received ETB 35.2m (£1.2m) for its 16 FTI projects. The projects have been implemented since July 2014 in 9 regions, 13 towns and 2 'urban stations'. 10 of the projects were solid waste management and 6 of them were for urban greenery.

For this review, we collected information from several solid waste management projects in Amhara and Somali regions, and findings from these are summarised below.

A1.6.1 Economy

An analysis for cost drivers for the sector allocation is presented below in Table 18.

Table 18. Analysis of cost drivers in MUDH projects

	Expenditure (ETB)	Expenditure (estimated GBP)	Staff, office e Supplies and Rent	Transport and Fuel	Per Diem & Entertainment	Training, printing, advertisement	Purchase of forestry inputs	Purchase of vehicles and plant equipment	Construction, Services , Fees and Charges
Assosa (Greenery)	858,948.13	30,676.72	41%	1%	1%		30%		26%
Hawassa (Greenery)	1,463,651.31	52,273.26			11%	13%			75%
Shire (Greenery)	2,111,159.85	75,398.57				3%			97%
Adama (Greenery)	2,163,033.56	77,251.20				20%	7%		73%
Dire Dawa (Greenery)	1,041,317.50	37,189.91			0%	13%			87%
Butajira (Both)	1,414,579.65	50,520.70	6%	1%	3%	3%			87%
Hawassa (Solid Waste)	1,663,301.63	59,403.63	8%	18%	30%	45%			
Dessie (Solid Waste)	3,473,548.38	124,055.30	1%		1%	25%		44%	29%
Bishoftu (Solid Waste)	2,680,878.19	95,745.65			2%	12%		18%	68%
Addis Ababa (Solid Waste)	3,967,960.31	141,712.87		5%		30%		44%	21%
Logiya/Semera (Solid Waste)	1,370,257.52	48,937.77			1%	14%		85%	
Somali (Solid Waste)	18,693.87	66,763.82	37%	11%	33%	16%			4%
Harari (Solid Waste)	1,057,811.69	37,778.99	33%		3%	6%		9%	49%
Gambella (Solid Waste)	1,333,611.59	47,628.99		2%	1%	26%		70%	
	24,618,753.18	945,337.37							

Green highlights show the major cost drivers. Red highlights show where management costs exceeded 30%

- A member of the review team translated the financial information on 14 projects that was provided in Amharic. Examining those, we found that main cost categories differ in solid waste and urban greenery projects. Some of the very small projects listed separately, such as Afar project, which is assumed to be regional supervision related costs with a budget of ETB 83,000 (£2,900). In addition, several Regions were allocated a small budget for supervision: Amhara, SNNP, Tigray, Benishangul and Oromia.
- Out of the total allocation for MUDH, we calculated that ETB 437,865 was for greenery interventions, and ETB 924,007 for solid waste management.
- In the projects which included construction of structures, this line item constituted the biggest cost driver. Examples of the constructed structures are compost sheds, storage or transfer stations. Examples of construction costs as percentage of total costs among the FTIs are: Shire (96%), Bishofto (68%), Hawassa (67%) and Harari (39%). Other cost drivers were 'per diem' and 'training' items. For example in Dessie, training amounted to 24% of the total allocation. In Addis Ababa Sanitation services project, training was 30% of the total costs.
- The funds allocated for supervision and M&E for MUDH at federal level amounted to ETB2.7m, which corresponds to 9% (of the ETB 29.5m/ £943k). MUDH so far has utilised about 55% of that amount, whereas most of the other sectors have either fully utilised or nearly utilised theirs. This is higher than MOANR and MEFC's federal supervision costs.
- This is the only sector/ Ministry among the FTI recipients using the IBEX system for accounting and financial reporting, both at federal and regional levels.

A1.6.2 Efficiency

- In terms of the individual projects, level of utilisation varied. 10 out of 16 projects fully utilised their funding (99-100%). Overall, utilisation was shown⁴⁵ as 91.5% however that seems to be based on ETB 29.5m allocation, and not 35.2m as the CRGE Facility reports. The final report of MUDH on their FTIs dated June 2016 shows that 29.5m was the tranche released by MOFEC until November 2015. It was explained to the review team that MOFEC does not release next tranche of funds until the former tranche is at least 80% utilised.
- Assigning a 55% utilisation also for regional supervision, we calculated that regional supervision costs were ETB 591,357 (£21k), therefore bringing total supervision costs

⁴⁵ Financial report provided by MUDH, for information up to 31 May 2016.

for the sector to around ETB 3.2m (£110k), in other words **over an estimated 11% of total allocation for supervision costs.**

- In terms of direct and indirect beneficiaries: the reported direct beneficiaries are 1,934 and where explained in reporting, and 866 are mainly those who benefited from employment creation. Others such as training and awareness creation are not included in these. Indirect beneficiary figures appear to be from population figures of the project towns.

A1.6.3 Effectiveness

- It was reported to the review team that learnings from the experience of FTIs contributed significantly to their participation in the proposals to GCF along with three other Ministries. MUDH's funding share in that proposal is expected to be \$10m.
- MUDH documented the establishment of a significant number of enterprises in urban kabeles. In Addis Ababa, 70 small enterprises were established and in Mekele 84 small enterprises were established. Other small enterprises were established in other urban kabeles. In the municipalities visited there was evidence of significant employments. In Dessie (Amhara Region) there were 10 enterprises establish, one in each of the city's 10 sub-cities (kabeles) - each one employing 50 people. In Jigjiga (Somali Region), one enterprise was established that was working in 4 of the city's 20 kabeles - employing 210 people. Furthermore, field visits and discussions with community participants and enterprises indicate that the enterprises that are established have the foundation for viability.
- The direct beneficiaries reported are beneficiaries of job creation (long or shorter term), as reported by MUDH. This is a good result particularly in a short time of implementation. Costs comparison for these overall and in regions were presented below.
- The review visits noted basic awareness of safeguarding issues from staff involved in implementing the FTIs, though less knowledge in relation to the assessment and safeguards framework. Protective equipment had been provided in both solid waste sites visited during the review mission, and no land use changes had been undertaken. Larger scale investments will be needed to minimise environmental impacts as the sites grow.

A1.6.4 Bureau of Urban Development Jigjiga Solid Waste Management Project

Economy:

- Total project cost is ETB 1,87m. (£65,000⁴⁶).
- A breakdown of budget based on categories of spend was provided to the review team in Jigjiga. Based on this, key cost drivers were procurement of materials – containers and dust bins- (36%) and per diem payments (26%).

Efficiency:

- **Government contribution** was estimated based on a portion of salaries of 8 staff involved in the project, office space and a data assessment study that was paid for using the government funds. These amounted to an estimated ETB 1,041,600.
- The review team were told in Jigjiga that an estimated 500 people benefitted from the project interventions. Including only project costs this means £130 per beneficiary, and including also government contribution, £203. In terms of job creation, 86 jobs were considered (at the solid waste enterprise, 62 garbage collectors and 24 cashiers). This means cost per job created was **£762** (project costs) and **£1,186** (all costs).
- The results are not too high, especially if the jobs are to be sustained beyond one year. They are lower than Amhara figures, and lower than the sector average as discussed below. They are higher than an external comparator (in SCIP), also explained below, however the kind of job referred to in that analysis was not defined and this project has also incurred costs in relation to infrastructure and equipment, particularly in Amhara where trucks were purchased and a refuse site was upgraded.

Effectiveness:

- This project was considered successful by the review team. For a relatively small investment, it has contributed to improved solid waste management in Jigjiga town, as well as creating jobs.

⁴⁶ As at end July 2016.

Text Box:1

Solid Waste Management in Jigjiga:

Bureau of Urban Development in Jigjiga, Somali region implemented a solid waste management project in 2014-2015. The bureau has been working closely with Jigjiga municipality. The project, with a budget of about \$91k from the CRGE-F and further contributions from the Government (estimated value at around ETB 1m) have established a successful enterprise to collect solid waste around Jigjiga town. The solid waste enterprise has been in operation for ten months and already employs 62 staff (of which 32 are women), for garbage collection, as well as 24 cashiers. There is a tariff of collections for residential buildings (ETB 50), commercial entities (ETB 300-1,500) or government office (ETB 3,000). This enterprise has been expanding rapidly, with a monthly revenue of ETB 280k to 290k, and now they are in the process of buying 3 trucks (free of import duty, with Government permission) to transport the solid waste to the designated dump area. The FTI project has also trained staff of the other 3 solid waste collector enterprises in the area. It has also been working on awareness creation for using the services of the waste collector enterprises and preventing burning or illegal dumping of trash around the region.

A1.6.5 Dessie City (Amhara) Solid Waste Management

Economy:

- Total project budget was ETB 3,366,710 (around \$155k.), over 60% higher than the Jigjiga project. Dessie project is the biggest in size among the sector FTIs.
- 44% of costs was for the procurement of tractors and other solid waste related equipment. Close to 29% was for construction of various structures. This was followed by training costs (24%). Dessie project was different from the Jigjiga one in terms of cost categories: for example tractors were bought in Dessie, and construction costs were incurred.

Efficiency:

- According to field notes, Government contribution was over ETB 9.5m (which amounts to the cost of additional 9 tractors). In this case, total cost of project comes to ETB 12,866,710.
- Based on field reporting, 126 jobs were created (majority of them street cleaners and 26 for operating of tractors etc.) However, total number of direct beneficiaries was given as 646 in another report. Using a conservative estimate, 646 may have been

total beneficiaries from the project, and 126 of those benefitted from employment creation. Other beneficiaries may have been those participated in various trainings.

Effectiveness:

- Using the 126 beneficiaries reported, **cost per job created is £926**. Cost per overall direct beneficiary is £180. These figures are higher than the Jijjiga figures above. Particularly when we include the high government contribution in Dessie, cost per job created is much higher, as seen in Table 19 below. However, this includes the costs of purchasing tractors (rather than the enterprise purchasing these themselves as in Jijjiga) and renovating the refuse site which has environmental benefits and has enabled compost production.

Table 19. Cost per beneficiary comparison between sites

<i>Based on FTI allocations</i>	Jijjiga	Dessie
Cost per overall beneficiary	£130	£180
Cost per job created	£762	£926
<i>Government contribution included</i>		
Cost per overall beneficiary	£203	£691
Cost per job created	£1,186	£3,531

Source: Compiled by the author.

- Across all FTIs of the urban development sector, based on 866 beneficiaries of employment creation⁴⁷ and total funds spent, **cost per job created comes to £1,260**.
- Finally, as an external benchmark, the recent SCIP Fund Evaluation reported that cost per job created by the Fund grants was £582.18⁴⁸. However, we don't have details on what kinds of jobs were being referred to in that analysis. Therefore the comparison may not be accurate. The definition of what constitutes a job matters greatly in this type of comparison.

⁴⁷ MUDH portfolio analysis compiled for this review, based on MUDH reporting.

⁴⁸ SCIP Fund Final Report, by KPMG, March 2016, p.162.

- In terms of cost per enterprise established, based on at least 170 small enterprises reported, cost comes to **£5,880 per enterprise**. In Addis project which accounts for 70 of those enterprises, cost is £2,024 based on its total allocation.

A1.6.6 Conclusion

- MUDH projects performed well on their procurement in terms of timely turn around, provided costs at reasonable detail required, and overall utilised funds at over 91%, better than many other sectors. MUDH also contributed significant government funds to some of their projects. Further, the FTIs visited in the regions recorded good results in employment creation.
- Despite the initial scepticism about MUDH's ability to engage effectively in CRGE and implement projects utilising donor funds, MUDH ultimately had a good performance record implementing FTI projects and that there has been good uptake in the use of project resources.
- Overall, we conclude that the investment in MUDH FTIs has reasonably likely provided value for money.

A1.7 Ministry of Water, Irrigation and Electricity (MOWIE)

MOWIE projects have faced significant delays due to using of international procurement. Among the sectors, it has received the second biggest allocation (after MOANR) with ETB 95.1m (£3m⁴⁹). The projects and their funding levels are as below⁵⁰. A fifth project, 'Strengthening the Capacity of Petroleum Downstream Operations' was moved to the Ministry of Mining.

The projects and their levels of funding are:

Table 20. Level of funding by MoWIE project

Project Name	Budget (as per proposals shared July 2016)
Accelerating the National Biogas Programme	\$64,229.20 (£39,703)
Solar power for water supply and irrigation	\$2,713,874.00 (£1,731,520)

⁴⁹ As at 2 December 2014, as most of the contracting was done around early December.

⁵⁰ When asked for project expenditure information MOWIE provided the project proposals which include the requested amounts. However they may be different from the amounts actually approved. We asked for ledgers covering the whole duration of the projects, but were told this information was not readily available. Only one period (Jan-Jun 2016) was available.

Improving Livelihoods of the Rural Communities of the Emerging Regional states through dissemination of solar energy technologies	\$ 2,001,316 (£1,276,890)
Strategic Support for Water Monitoring systems project	\$700,000 (£446,617)
Total	\$5,479,149⁵¹ (£3,495,830)

The total value of these projects is more than the ETB 95.1 m. (\$4.3m) reported by the CRGE Facility as allocated to MoWIE, suggesting that updated proposals or budgets may have been developed for contracting but this information was not available.

A1.7.1 Economy

- Cost categories and cost drivers could not be ascertained. MOWIE has only provided planned budget breakdown and not actual expenditure. Some expenditure information was provided (as trial ledger) but it is not broken down in main cost categories and only covers 6 months.
- There was an international procurement in each of the projects, except the biogas project. This significantly delayed other project activities, and as a result MOWIE projects are lagging significantly behind, compared to the other FTI recipient sectors. A lesson here could be that project planning should take into account time constraints and expected delays, particularly where international procurement is involved. Alternatively, private sector agents could be involved in the projects, who would also carry out the procurement.
- With the exception of the biogas project, MOWIE projects are sizeable, when compared to other FTIs, reflecting the nature of the energy sector projects.

A1.7.2 Efficiency

- The fund utilisation on the projects varies. The biogas project has recorded a higher utilisation than others. The remaining three have low utilisation due to awaiting international procurement.
- So far, only 2% of the total funding amount was settled by MOWIE as per the CRGE Facility records.
- The biogas project is the only project which did not have international procurement and whose main activities commenced. The project aimed to construct 40 biogas

⁵¹ The “Strengthening the monitoring Capacity of Petroleum Downstream Operations Regulatory Directorate” had an approved proposal for \$ 635,000 (£405,145).

digesters, and so far 17 were completed, and are being used by the recipient households.

- Based on total funding, the **Cost per biogas digester** at the moment is **\$3,438 (£2,610)**, which is very high.⁵² The costs include training of 20 experts and project supervision costs. Excluding those, cost per digester is \$2,700 (£2,050).
- According to research on household level biogas digesters in Nepal, India, Costa Rica, Vietnam, these were reported to cost around \$200 to \$400.⁵³ Even accounting for inflation since the study took place this is still significantly lower.
- Cost per beneficiary household is the same, as one biogas digester can be used by one household only.
- Even when the targeted 40 digesters is completed, the cost would still be more than double the international benchmarks at \$1,461 (£1,109). These high costs are unlikely to lead to the desired demonstration effects for adoption of the digesters. Since in other countries, the private sector has been an active distributor of low-cost biogas technologies, similar options could be explored in Ethiopia. It may be that subsidising others would be a cheaper way of increasing coverage than direct delivery.

Other emerging unit costs are:

- **Cost per solar water pump comes to ETB 60k (£2,084)** including transport, instalment, etc. based on 42 pumps procured. However, including all other costs related to bid preparation, evaluation workshops, etc this is ETB 64k (£2,223). These were calculated using the cost categories in the project proposal, and may have turned out different in implementation.
- MOWIE officials explained that a similar intervention was carried out under an African Development Bank project, and the results were successful at community-level which encouraged them to use the FTI to continue that work. However, this project had a model of managing a revolving fund through the Development Bank of Ethiopia (DBE) and MoWIE reported in July 2016 that they wanted to explore alternative approaches to this via Regional Microfinance Institutions due to the extremely high management costs quoted by DBE. MOWIE officials also explained that they have plans to pilot payments from user communities for maintenance and eventual replacement of the solar water pumps using the Revolving Fund mechanism.

⁵² Based on the \$58,459 total budget presented in June 2016.

⁵³ Rajandran K. et al., Household Biogas Digesters: A Review, University of Borås Sweden, August 2012, mdpi.com/journal/energies.

- According to MOWIE calculations, one pump site is expected to benefit 3,500 people (not households).
- **Cost per solar lantern distributed (\$15 or £11.4).** The distribution has not yet taken place, the lanterns were procured. We don't have the specifics of the lantern to be distributed, however it seems to be on the low cost end of the range for solar lanterns⁵⁴ in Ethiopia which ranged between £11 and £100.
- **Cost per water meter installed and in use:** Based on 52 such meters, and total budget as per proposal this comes to \$13,461 (£10,223) per meter. This is not based on actual costs, just planned. A comparator could not be identified.

A1.7.3 Effectiveness

- It is difficult to conclude on effectiveness of MOWIE projects as the majority of them are at procurement stage. The biogas project which has started, has so far featured very high costs per digester manufactured, therefore unlikely to be scaled up.
- The Solar Electricity strategy favoured by MoWIE reflects a dual approach. On the one hand, distribution of solar lanterns to vulnerable women is seen as the creation of a social and environmental good without any particular expectation of sustainability or replication beyond the project lifetime. In the case of the solar home systems, better-off households will buy these products using loans from microfinance institutions. It is hoped that this will create a demonstration effect which may later encourage others to seek out private sector providers and develop a national solar market. However, it is doubtful whether public procurement and distribution (albeit on a loan basis) will support the domestic solar market. Smarter subsidy approaches to strengthen that market may also be available and lessons from other countries could be investigated.
- Key informant interviews with the sector at federal level have indicated that the learning and experience of engaging with the CRGE has been useful for this particular sector, as they have less experience than, for instance, MEFCC in climate adaptation issues. This learning is of value, however it is not possible to monetise it.

A1.7.4 Conclusion

At the time of writing, majority of the MOWIE projects were at the end of procurement stage and had not delivered their intended results. Therefore the unit costs presented are based on planned costs. Significant delays in procurement weakened the economy performance, which

⁵⁴ Prices based on 2014 figures, https://energypedia.info/wiki/Lists_of_Solar_Lanterns_Sold_in_Ethiopia

also led to low utilisation of funds and low efficiency. Once the projects reach further stages of implementation and procured items are utilised and/ or distributed, there will be more evidence as to their effectiveness. We cannot conclude at this stage whether the funds allocated to the sector have provided value for money, beyond the learning on CRGE for MOWIE.

Annex 2. VfM Information Collection Tool

A2.1 Economy

Economy analysis reviews the cost per input going into the programme and reviews the procurement procedures to identify if there are opportunities to increase the value for money being achieved in procurement. Value for money is not achieved by the lowest possible price for a given input; it is a function of price, appropriateness, quality, and timeliness of sourcing the input.

- What is the project's key inputs that are routinely procured? (if info not available for all inputs procured, two or three main ones should be discussed)
- Which procurement methods were used? Can you describe in detail?
- Were unit costs of those inputs estimated at the design phase? Were the actual costs similar? (if info not available for all inputs procured, two or three main ones should be discussed).
- What kind of measures were implemented to control costs?
- How many staff are involved in this project?
- What are the key cost categories, as shown in your expenditure reporting (to CRGE/ to the relevant ministry)?
- Can you show all the administrative costs in the costs breakdown?
- Can you provide a recent expenditure statement on the project covering all items?
- What goes under the categories defined in the expenditure statement? (we can go over the statement if it is available by then, or prompt them to define the items/ categories)
- Is there an asset register and where is it held?

A2.2 Efficiency

Efficiency analysis reviews the cost per output generated by the programme.

Efficiency metrics focus on beneficiary and output numbers, rather than outcomes for beneficiaries. However, it is important to note that value for money is not necessarily guaranteed by achieving the lowest possible cost per output. The quality of delivery of outputs is also a concern for efficiency.

- On the key costs, what are the trends, if available from expenditure statements?

- At present time, what is the rate of overall disbursement on project funds? (what is the the budget utilisation?)
- Is the utilisation information available for different project components? Are there significant variances? If yes, why?
- How often is the financial reporting done? What is the rule you have to follow on that?
- What were the main risks during implementation and how do you manage those risks?
- What are the mechanisms you use for quality assurance of delivery?
- Was there any innovation?
- Were any additional funds leveraged thanks to the FTI implementation?

A2.3 Effectiveness and Cost Effectiveness

Effectiveness is concerned with the process of converting outputs into outcomes and impact. Doing this at the lowest possible cost signifies cost effectiveness. The issues of targeting, scaling up, coherence of outputs and equity are all related to effectiveness.

- What results were achieved so far?
- Are you able to track costs of those results? (For example, beneficiaries reached, seedlings distributed, etc?)
- How is MRV addressed in the project?
- What measures were taken to ensure sustainability beyond the project duration?
- How were women (or other vulnerable groups, if there were) considered in design and implementation? How did they benefit?
- Can this project be scaled up? How and why? (this is to help us decide whether any of the approaches used in the project can feasibly and usefully be scaled up).

A2.4 Additional on VfM

- What are the three VfM good practices from the project? (respondents could be prompted from examples. I put a list in DropBox)
- Any reflection on what the project could have done different/ additionally? Any lessons learned?
- Quality of data collection and reporting.
- Beneficiary feedback.

Annex 3. Review Matrix

Criteria: Relevance / Effectiveness

1. How adequate and relevant were DIFD investments in the CRGE Facility to the Government of Ethiopia’s ability to deliver its CRGE Vision and Strategies?

Sub-questions	Proposed indicators	Proposed data collection methods
<p>1.1. To what extent has donor funding to the CRGE facility contributed to the GoE’s ability to deliver the CRGE?</p>	<ul style="list-style-type: none"> - Extent to which the FTIs/TA/DFID engagement contributed to the creation of an institutional set up that has successfully leveraged additional climate resources - Level of understanding/learning achieved about the practicalities of CRGE implementation – do sectors know “what CRGE looks like on the ground?” - Evidence available to support the relevance / quality / impact of the interventions (in relation to both DFID/GoE priorities) prioritised during the FTI process - Level of capacity at national and local level for integrating CRGE considerations (as above) - Extent to which donor investments/engagement have influenced this capacity - Extent to which this capacity is resulting in actual change in delivery - number and type of policy and investment decisions credibly influenced by DFID or other donor funding/engagement - Views on trade-offs between equity across sectors and CRGE contribution or between different objectives of CRGE. 	<p>Review of national capacity assessment documents; MCAM analysis for sectors; stakeholder interviews at kebele to national level.</p>

<p>1.2. To what extent are CHIP-funded CRGE results being delivered up to end May 2016?</p>	<ul style="list-style-type: none"> - Comparison between FTI proposals and reports - Analysis/quality rating of FTI project portfolio based on the following criteria: <ul style="list-style-type: none"> - Outreach (% of results targets met – e.g. hectares, # of technologies installed, beneficiaries) - Accuracy of budgeting (# of budget lines with over 10% variance or where changes to budget were not justified) 	<p>Literature Review</p> <p>Field visits & interviews with CRGE implementers</p> <p>Focus group discussions and beneficiary testimonial collection</p>
<p>1.3. What remains to be delivered up to December 2016?</p>	<ul style="list-style-type: none"> - Realistic timeframe (Whether the duration of financial support was realistic for the ambition of the project) - Quality of financial reporting (clarity of reports and time invested by CRGE Facility in financial management support) - Quality of monitoring data (time invested by CRGE Facility in M&E Support; knowledge of M&E process by respondents from kebele, woredas, region and sector level for each sector). - Quality of implementation of at least four projects from different sectors based on case study analysis in two regions 	<p>Technical specialists critical review of results</p>
<p>1.4. To what extent do women and girls benefit from CHIP-funded CRGE results?</p>	<ul style="list-style-type: none"> - Number and % of women and/or female headed households benefitting from FTIs. - Extent to which an analysis of the drivers of gender inequality were taken into consideration in the design of each FTI - Extent to which gender benefits or risks are routinely reported - Extent to which both men and women in male-headed households and female heads of households were able to participate in FTIs or to benefit from project outcomes. - Extent to which labour or risk burden created by the programme activities was distributed between both women and men in male-headed households or female-headed households. 	<p>Sector FTI proposals and reports.</p> <p>Interviews with FTI implementers at woreda and kebele level.</p> <p>Focus group discussions and interviews with women and men.</p> <p>Review of implementation design, interviews with FTI implementers and focus group discussions.</p>

	<ul style="list-style-type: none"> - Extent to which other vulnerable groups (girls, youth, disabled people, low income groups may benefit from different interventions). 	
1.5. Is there a trade-off between programmatic thinking and mainstreaming objectives?	<ul style="list-style-type: none"> - Level of integration between CRGE programmatic plans and other policy/programmes in the sector - Level of integration of institutional structures for delivery of CRGE versus other policy/programmes - Time investment in programmatic planning across sectors - Assessment of different delivery approaches with respect to mainstreaming and programmatic planning objectives - Extent to which results were delivered using FTI resources and co-financing from other programmes or GoE core budget 	<p>Document review of CRGE Programmatic Plans</p> <p>Interviews with Sectors</p> <p>Interviews with non-CRGE Facility run sector programmes</p>