

## Darwin Initiative Main Project Annual Report

**Important note:** To be completed with reference to the Reporting Guidance Notes for Project Leaders:  
it is expected that this report will be no more than 10 pages in length, excluding annexes

**Submission Deadline: 30 April**

### Darwin Project Information

Project Reference	22-006
Project Title	Mainstreaming biodiversity conservation and climate resilience at Yayu Biosphere Reserve
Host Country/ies	Ethiopia
Contract Holder Institution	Royal Botanic gardens, Kew
Partner institutions	Environment and Coffee Forest Forum (ECFF); HiU Coffee; Union Hand-roasted Coffee (UHRC)
Darwin Grant Value	£315,790
Funder (DFID/Defra)	DFID
Start/end dates of project	1 April 2015 to 31 March 2018
Reporting period (e.g., Apr 2015 – Mar 2016) and number (e.g., Annual Report 1, 2, 3)	1 April 2015 to 31 March 2016. Annual Report Number 1.
Project Leader name	Dr Aaron Davis
Project website/blog/Twitter	Kew website (science pages) under construction <a href="https://www.unionroasted.com/blog/03/18/at-origin-yayu-coffee-forest-in-ethiopia/">https://www.unionroasted.com/blog/03/18/at-origin-yayu-coffee-forest-in-ethiopia/</a> <a href="https://www.unionroasted.com/coffees/espresso-coffee/yayu-geri-co-op.html">https://www.unionroasted.com/coffees/espresso-coffee/yayu-geri-co-op.html</a>
Report author(s) and date	Aaron Davis

### 1. Project Rationale

**Context.** Yayu Reserve (167,000ha) is divided into: (1) core zone, (2) buffer zone, and (3) transition area(s). It is home to around 450 higher plants, 50 mammal, 200 bird, and 20 amphibian species, plus important wild crop genetic resources (including *Coffea arabica*). Coffee cultivation occurs within forests of the buffer zone and transition areas. At Yayu, coffee generates up to 70% of the cash income for over 90% of the population.

**The problem.** Most farmers in the area are struggling to make sufficient income from coffee. This causes a conversion away from forest-based production (coffee), to non-forest crops such as the narcotic khat and maize, leading to forest loss, biodiversity loss, a reduction in ecosystem services, and a narrowing of income diversity. The most important factor restricting coffee income at Yayu is coffee quality, rather than productivity/quantity. If quality is assured then a market will exist. At Yayu we need to: (1) increase the income from coffee; (2) reduce land-use change/conversion; (3) preserve biodiversity; and (4) minimize farmer's vulnerability to climate perturbations. These main issue regarding forest conservation was identified by project partners ECFF, after more than a decade of working at Yayu. A Darwin Scoping award in

November 2013, undertaken by Aaron Davis (Kew), Tadesse Woldermariam Gole (ECFF) and Jeremy Torz (UHRC), was used to investigate the issues around increasing value (and thus income) from coffee via quality and a strengthened value chain.

The locality. Yayu is located in the province of Illubabor, in SW Ethiopia.

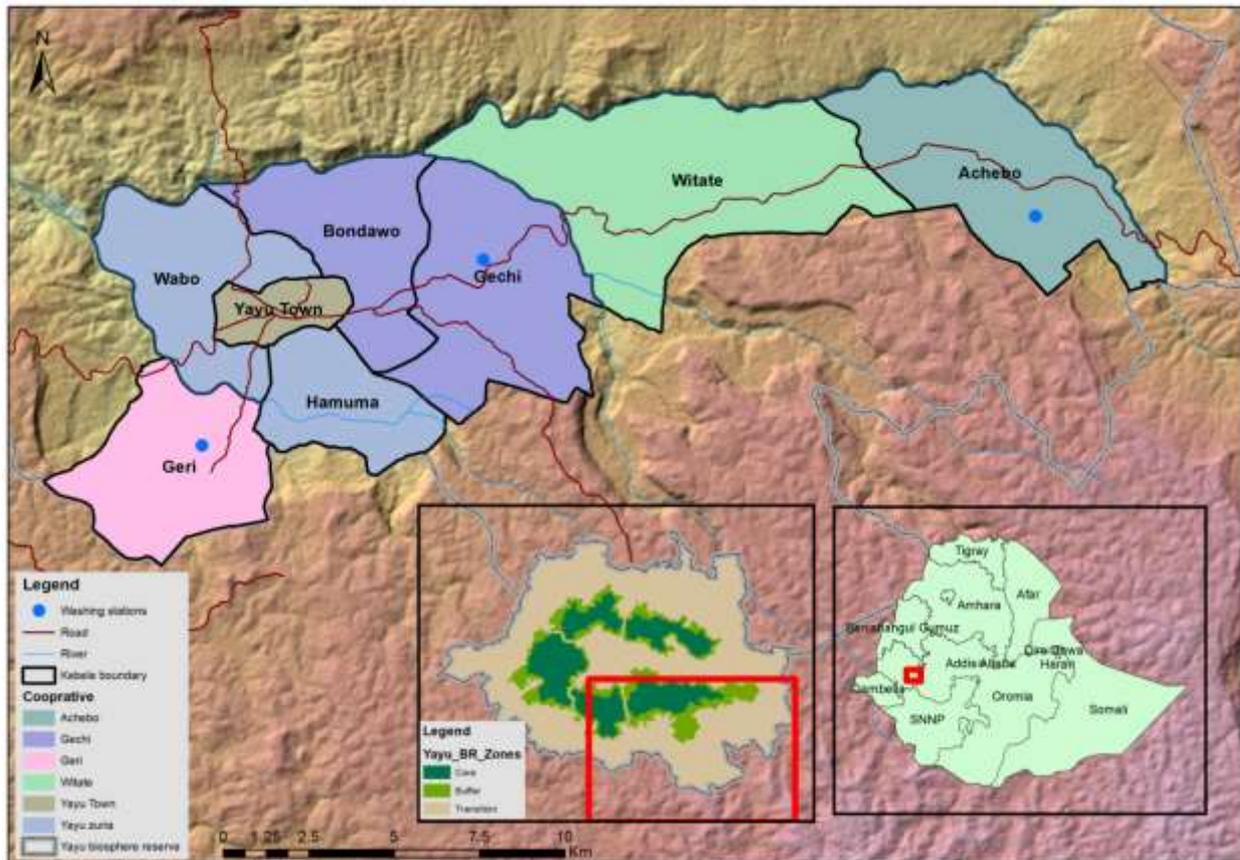


Figure 1. Location of Yayu Reserve, its five coffee cooperatives and their Kebeles.

## 2. Project Partnerships

RBG Kew is the Project Leader and is responsible for the organization and day-to-day management of the project, science activities, budget, and project M&E. ECFF are the in-country Project Leader and negotiating body for government agencies, in-country civil societies, coffee exporting bodies and community governance (including cooperatives and local administration). HiU Coffee are responsible for providing the training in coffee harvesting, post-harvesting, cup evaluation and packaging, for the five Yayu cooperatives. They also lead on purchasing and installing coffee processing equipment and overall improvement in coffee quality. UHRC are responsible for providing access to market for Yayu cooperatives, via direct-trade coffee purchasing, and, in conjunction with HiU Coffee, play a key role in assessing coffee quality and market value. UHRC also provide funding and resources for socio-economic evaluation, via the employment of a socio-economist Pascale Schuit.

There was a demand from the host partner (ECFF) to develop a more sustainable outcome for Yayu coffee production and farming livelihoods, after more than a decade of dedicated intervention activities at the Yayu Reserve. All of the partners are involved in project planning, development and M&E as they have specific areas of expertise and experience, each necessary to the success of the project. There have been no project partnership changes or challenges during the 2015/16 reporting period.

### 3. Project Progress

#### 3.1 Progress in carrying out project activities

**Output 1** Five Yayu coffee cooperatives are provided with the equipment, training, supervision, and information resources needed to improve (and sustain) coffee quality

Activity 1.1 Half of the processing equipment (drying beds) has been provided for all five Yayu cooperatives. Quality evaluation equipment and cupping lab building materials has been ordered.

Activity 1.2 This will come in Year 2, once the cupping lab is built and equipment installed.

Activity 1.3 A total of 271 individuals (trainers and farmers) trained in pre and post harvesting techniques, including the construction of drying beds.

Activity 1.4 First drafts of the four training manuals have been produced, and translated into Oromifa language by the project trainers. The manual files are presently with designers commissioned by UHRC, for design purposes.

Activity 1.5 The final versions of each manual (950 copies each) are due for completion at end of June 2016, and for distribution in September 2016.

Activity 1.6 This activity is for Years 2 and 3.

Activity 1.7 A socio-economic workshop (led socio-economist Pascale Schuit) was undertaken in October 2015 (two days), with the Wutate cooperative. Accompanying farmer/community discussions with Wutate and the other cooperatives was undertaken after the workshop (seven days). This work was followed-up by P. Schuit during visits to Yayu in January 2016 and March 2016.

**Output 2.** Yayu household members (particularly women) are provided with access to training, and then employment within the local coffee sector.

Activity 2.1 Household training in coffee processing for XXX recipients was provided by HiU coffee and trainers.

Activity 2.2 This is a Year 2 activity.

**Output 3.** Area (land-use) analysis of forest and forest-based household income areas for the Yayu Reserve.

Activity 3.1 The land-use vegetation map for the Yayu area, based on RapidEye data (5 m resolution) has been completed.

Activity 3.2 A Year 2 activity. A basic land-use change map has been produced.

Activity 3.3 A Year 3 activity.

**Output 4.** Yayu coffee cooperative members are provided with the training and information resources required for on-farm climatic resilience.

Activity 4.1 Three trial plots have been installed and farmers commissioned/trained to gather data and undertake farming interventions. Brief details of the plots are as follows. Plot 1 is dedicated to mulching and micro-terracing. Plot 2 is a tree-stumping trial. Plot 3 is a pruning trial. A fourth plot (Plot 4), for shade management, is envisaged for 2016/17. These plots have been established to better understand their value in terms of measurable increases in coffee productivity and quality, and improvements in climatic resilience.

Activity 4.2 The first round of plot data evaluation is planned for October 2016.

Activities 4.3 to 4.5 These are Year 3 activities.

#### 3.2 Progress towards project outputs

<b>Output 1</b>	Five Yayu coffee cooperatives provided with the equipment, training, supervision, and information resources, needed		Comments (if necessary)
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	to improve (and sustain) coffee quality			
	Baseline	Change recorded by 2016	Source of evidence	
Indicator 1.1. Five Yayu co-operatives are provided with the equipment required to correctly process and evaluate their coffee, in order to attain (and sustain) high quality. <u>By Year 1.</u>	No drying beds or quality evaluation equipment available.	Half of the processing equipment (drying beds) provided for all five Yayu cooperatives. [See below for further details]. Quality evaluation equipment and cupping lab building materials ordered.	See: "Summary report from HiU coffee.doc". Question 1.1.	Second half of drying bed materials to be installed prior to 2016 harvest. Cupping lab equipment ordered. Awaiting construction of cupping lab before installation. On course for completion.
Indicator 1.2. 950 cooperative members (for the 5 cooperatives) provided with the training, supervision, and information resources (including coffee processing handbook), needed to improve (and sustain) coffee quality. <u>By Year 2 and 3</u>	No training in pre and post harvesting techniques. No manuals or other training resources available to farmers.	23 trainers and 63 farmers/coffee workers trained in coffee processing and construction of drying beds. Coffee processing manuals written and translated into Oromifa language.	See: "Summary report from HiU coffee doc".	Training to be scaled-up, now that the trainers have been trained. Trainers to record number of trainees and gender. On course for completion
Indicator 1.3. 950 cooperative members (households) with an annual increase in income of 30%. <u>By Year 3.</u>	Baseline price of \$1.00 per lb for processed green coffee. And see other supporting evidence and metrics	An elevated price of \$2.55 per lb for processed green coffee, plus a \$0.20 per lb quality premium paid to cooperatives producing export coffee. This represents a 180%	See "Yayu contract 2016" (pdf), the spreadsheet. "YayuValue Calculations.xls" and "prices to farmerer_P.Schuit_notes.doc"	Good progress made here. More data and agreed method of working out outcome increase required for Year 2.

		increase in the unit price paid for quality coffee		
<b>Output 2</b>	Yayu household members (particularly women) provided with access to training, and then employment, within the local coffee sector			
	Baseline	Change recorded by 2016	Source of evidence	
Indicator 2.1. 12,000 square meters of drying bed equipment (Africans Beds) installed for five cooperatives. <u>By Year 1.</u>	No drying beds.	A total of 5,850 m <sup>2</sup> of drying bed materials purchased and installed	See: "Summary report from HiU coffee doc".	A further 6,000 m <sup>2</sup> of drying beds to be installed before the 2016 harvest.
Indicator 2.2. 250 (extra) household members trained in coffee harvesting and processing techniques. <u>By Year 1.</u>	Little or no seasonal labour.	An estimated 40% increase in seasonal labour due to increase in production of high quality coffee.	See: "Summary report from HiU coffee doc".	Trainers to record number and gender of extra workers in Year 2 and Year 3.
Indicator 2.3. 250 (extra) household members seasonally employed within the Yayu coffee sector. <u>By Year 2</u>	Little or no seasonal labour.	A Year 2 Indicator.		
<b>Output 3</b>	Area (land-use) analysis of forest and forest-based household income areas for the Yayu Reserve			Comments (if necessary)
Indicator 3.1. One Ethiopian GIS technician trained/supported in advanced land-use change technology and methodologies. <u>By Year 1.</u>	An Ethiopian GIS technician with good GIS skills.	Ethiopian GIS technician trained and supported in advanced land-use change technology and methodology.	Maps produced by Zeleke Challa	
Indicator 3.2. Three land-use change maps produced for Yayu Reserve. <u>By Year 2.</u>	Nothing available.	Basic land-use change maps produced.	Maps produced by Zeleke Challa	
Indicator 3.3. One new forest-cover survey	Nothing available.	No change anticipated for 2015/16.		

map produced for Yayu Reserve. <u>By Year 3.</u>				
<b>Output 4</b>	Yayu coffee cooperative members are provided with the training and information resources required for on-farm climatic resilience			Comments (if necessary)
Indicator 4.1. 3 Yayu farm plots (1 ha) provided with, and participating in, on-farm climate adaptation trials. <u>By Year 1.</u>	No farm plots/resilience trials in operations.	Three plots set up.	See notes above under section 3.1.	
Indicator 4.2 On-farm adaptation evaluation provided for 3 Yayu farm plots, and this broadened to provide an overview of climate resilience, etc. <u>By Year 3..</u>	As above.	No change anticipated for 2015/16.		
Indicator 4.3. Five Yayu cooperatives provided with training in, and information resources for, on-farm adaptation, by Year 3.	No adaptation training or experience.	No change anticipated for 2015/16.		

### 3.3 Progress towards the project Outcome

Outcome:	Paste here			Comments (if necessary)
	Baseline	Change by 2016	Source of evidence	
Indicator 1. A 30% increase in cash income for the 950 Yayu coffee cooperative members (5 cooperatives). <u>By Year 3.</u>	Farmers either not selling their coffee; selling only fresh cherry (very low value); or selling processed cherry at NY commodity price (c. \$1.30).	A 21-29 % increase across all 950/784 households. This does not include the increase of 20% from switching co-operatives. See notes in Section 6.	See See "Yayu contract 2016.pdf" and "Yayu Value Calculations.xls".	More quality coffee in 2016/17 will see a further increase in income, unless El Nino influences quality.
Indicator 2. A 25%	Little or no	An estimated	See: "Summary	Trainers to

increase in seasonal employment for household members of the Yayu cooperatives. <u>By Year 2.</u>	seasonal employment.	40% increase in seasonal labour for 2015/16.	report from HiU coffee doc".	record number and gender of extra workers in Year 2 and Year 3.
Indicator 3. A 100% increase in the number of forest-cover surveys for Yayu Reserve. <u>By Year 3.</u>	No forest-cover/land-use surveys.	Basic forest cover surveys completed, as per log frame	See "Overview of Maps".	
Indicator 4. 20% of the 950 Yayu coffee cooperative members provided with a clear understanding of climate resilience/adaptation methodologies. <u>By Year 3.</u>	Little or no adaptation training or experience.	No change anticipated for 2015/16.		

### 3.4 Monitoring of assumptions

**Assumption 1:** That an improvement in coffee quality will lead to a significant increase in market value, and that there is a strong, growing and sustainable market for improved (high quality/speciality coffee). In order to achieve this, essential equipment, training and information resources (e.g. handbooks and posters) are required.

Comments: The increase in the coffee purchased and increase in price (paid by UHRC), substantiates this assumption. See notes in Section 6. The training and other interventions have produced a large amount of high quality coffee (from four of the five cooperatives) from low grades (Grade 4 to 9; cupping score below 70), to high grade (Grade 2, cupping score 85+). See notes in Section 6 and accompanying documentation.

**Assumption 2:** That there will be a requirement for extra coffee workers as the price and demand for Yayu coffee grows, especially due to the conversion of unprocessed coffee fruits (transported out of the reserve area) to coffee processed at Yayu.

Comments: This has been calculated based on an increase in coffee production by 41%. We will ask trainers to record number and gender in Years 2 & 3.

**Assumption 3:** That by making forest-based coffee production systems more financially successful, there will be a strong incentive to maintain these forest-based cultivation systems, reducing conversion to non-forested systems. Preserving semi-wild and forested agricultural systems will retain forest cover and preserve valuable biodiversity and ecosystem services, and that this can be measured by a detailed GIS land-use survey and on-the-ground survey.

Comment: This assumption cannot be tested until Year 3.

**Assumption 4:** Yayu is within a climate vulnerable coffee growing area: interventions will be required now and over the coming century. Ethiopian coffee farmers are ill-equipped to deal with climate resilience. Increases in income will incentivize farmers, and provide the financial resources, to adapt their farms for improved climatic resilience. Development of land within and/or adjacent to the Yayu reserve, could be an issue within the next few years and in decades to come, however, the land identified for development is not within the coffee farm or processing areas.

Comments: Yes. El Nino conditions (2015/16) resulted in a lost harvest for farmers at lower elevations (outside the area of most Yayu cooperative households), and those not adopting

best-practice agriculture. Plot experiments have been redesigned to include real-life cost-benefit analyses to test this assumption more fully. Land-use change study has been adapted to include urbanization. This assumption cannot be fully tested until Year 3.

### **3.5 Impact: achievement of positive impact on biodiversity and poverty alleviation**

See Point 6 for poverty alleviation. Indicators on biodiversity conservation will not be available until Year 2 and 3.

## **4. Contribution to SDGs**

Our project covers numerous sustainable development goals (SDGs), especially 1, 2, 5, 8, 13, 15 and 17. Although this is only Year 1 of the project we already feel that we are directly addressing these goals. The coffee farmers at Yayu now have a sustainable access to market, and a belief that their incomes will grow (SDGs 1, 2 and 8). It is clear from discussions, meetings and workshops that the Yayu farmers are very aware of the importance and benefit of natural terrestrial ecosystems (SDG 15); they just need to see the financial proof (via coffee purchasing) that the end parts of the value chain also recognize this and are willing to pay for it. Our training programme has been re-designed to fully engage women and girls (SDG 5), by empowering the local female school teachers as the trainers. UHRC Direct Trade model of purchasing sets a high standard within the coffee sector, and pushes an agenda for developing partnerships and mechanisms for trading relationships that benefit farmers (SDG 17). Our work on understanding and implementing climate resilience at the farm-level is breaking new ground. Even in Year 1 we have been able to advise other projects on implementing climate smart agricultural practices and climate resilient/value chain evaluation systems.

## **5. Project support to the Conventions, Treaties or Agreements)**

In Ethiopia c. 15 million people depend on coffee farming for their livelihoods. Ethiopia's 5th CBD Progress Report (2014; <https://www.cbd.int/reports/search>), states that there is a specific objective to half habitat conversion. Ethiopia's *Poverty Reduction Strategy Paper* and *Growth and Transformation Plan (2010/11–2014/15)* highlights that increasing coffee productivity, while conserving biodiversity [CBD goals] and genetic resources, will play an important role in Ethiopia reaching Millennium Development Goal (MDG) 1.

We will not be able to measure this aspect of the projects success until Year 3.

## **6. Project support to poverty alleviation**

Project documents and other evidence shows that the project is having a substantial influence on farmer/co-operative income (and thus poverty alleviation).

1. An increase in income from coffee farming of c. 20% for each household in Year 1, across the five cooperatives (5 cooperatives/950 households). Or, an increase in 29% across 784 households, on the basis that coffee was purchased from four cooperatives (see UHRC purchase contract). On average 65% of each Yayu farmer's land is dedicated to coffee production, but for many it is 100%. The coffee landscape of Yayu is extremely heterogeneous, with a wide range of farm sizes and, and different levels of commitment to coffee farming (e.g. 9 to 100%; see Wutate member's list2.xls). We made various calculations as to the average annual income per household, but settled on £673/\$1143 as this was the only figure verified by Yayu farmers.

2. An increase in production volume and quality of coffee: £229,305 was paid for the coffee grown by four of the five cooperatives in Year 1. Union Hand Roasted Coffee (UHRC) purchased 811 x 60kg sacks (48,660 kg/48.6 metric tonnes) of green coffee (i.e. the exportable product, pre-roasting), from four of the five cooperatives. Post Darwin Scoping Award, and pre-project start (2014/15), UHRC made a commitment via a proof of concept trial, by working with HiU Coffee and Yayu farmers to put together a shipment of acceptable quality coffee. UHRC purchased 37 metric tonnes in 2014/15. In Year 1 of the project this volume considerably increased (as did the quality) by 41%, 48.6 metric tonnes purchased in Year 1. Thus, since

Darwin Intervention (Scoping Study, plus Main Project) about £400,000 has been transferred into the Yayu coffee economy, that wasn't there before. It should be noted, and taken into consideration for all the following points, that when we first interviewed the Yayu farmers in November 2013, many were not even able to sell their coffee due to access to market issues (mainly due to low quality).

3. A substantial price increase paid per lb of (green) coffee. There has been a substantial increase in the price paid to farmers, from a base-price of \$1.00 per lb to \$2.55 per lb. The base-price is based on 50% of the coffee being sold as unprocessed/wet cherry (at \$0.50 per lb) [see Prices to farmers\_P\_Schuit\_notes.doc] and a 2015.16 commodity price of (\$1.50 per lb). In reality our base price is generous, as the minimum payment for wet/fresh cherry is \$0.13 per lb) and the maximum (\$0.21 per lb). In addition, the New York commodity price rarely achieved more than \$1.30 between January 2015 and January 2016.

4. A premium for high coffee quality production. UHRC are paying a direct quality premium of \$0.20 per lb to those farmers delivering high quality coffee (Grade 2 and above). (see YayuValueCalculations.xls). In Year 2 we need to assess how this was distributed and if the farmers were happy with the mechanism for payment. Points 1 to 3 translates to a 180% increase in the price per unit/weight for the farmer best coffee. In Year 2 and 3 we need to better understand the percentage of high-value coffee vs. all other coffee production, for each household/cooperative.

5. An increase in seasonal labour. Based on the increase in productivity (see Note 1) and extra input required for better harvesting and higher quality processing, we estimate that there has been a 40% increase in seasonal labour (especially at the washing station and at the drying beds). We are looking at ways to more closely measure where this labour is coming from (i.e. within or outside the cooperatives), the gender disaggregation and how the value/income is distributed.

6. More income for farmers via a better relationship with the Ethiopian trading partners. Although Yayu cooperative members collectively decided to terminate their trading relationship with Oromia Coffee Farmer's Cooperative Union (OCFCU), mainly due to the delay in payments for their coffee. This was causing problems at the farm-level because seasonal labour could not be hired during harvest and processing time, due to lack of funds. It also caused problems at the household-level, due to the long delay in income payments. In 2015, during the middle of the project's first year, the Yayu cooperatives made a new contract with the Sorgaba Union, for hulling/milling and exporting their coffee. Sorgaba have a shorter payment time to farmers, and return 90% of the coffee price value to the farmers (with OCFCU it was 70%). The 10% covers hulling/milling, sorting and export activities. While the Darwin project had no influence over the farmer's decision to move to Sorgaba Union, project partners HiU Coffee and UHRC assisted with the migration to the new union, including site visits to the processing and storage warehouses in Addis Ababa.

UNRC and HiU Coffee have pledged a long-term commitment to the Yayu cooperatives post project, as part of a sustainable direct trade model that benefits both producer and purchaser.

## **7. Project support to Gender equity issues**

HiU Coffee has made best use of an opportunity that was not apparent at the beginning of the project. At the main school (at Wutate, which is in a central (physical) position within the Yayu coffee cooperative landscape) most of the teachers are members of Yayu Coffee Farmer's Cooperative. The teachers speak English, Oromifa and Amharic, and thus can work easily with us and the community; their pupils are the sons and daughters of coffee farmers, and many also undertake seasonal work in family coffee farms. Thus, Wutate School's teachers have been employed as the coffee trainers. Of the 23 trainers 13 are male and 12 are female. We are asking them to record gender disaggregation for all project training, and plan to report more fully on this in 2016/17.

## **8. Monitoring and evaluation**

The project is monitored and evaluated using the log-frame, outcomes, activities, indicators, assumptions and outputs, as stated in the project proposal. The Project Leader (A. Davis) is responsible for managing and reporting the M&E, in collaboration with all project partner leads. This works well, especially as the Project Leader plays an active role in the project, and works alongside the other project partners at Yayu during project activities (for selected periods). We have a good (and longstanding) relationship with our in-country partners (ECFF) and have established a working relationship based on achieving outputs. HiU and UHRC are from the private sector and constantly monitor and evaluate their performance internally; sourcing high quality coffee is their livelihood. During the first year we have had at least five meetings (in London and in Ethiopia) for M&E purposes. Preparation for the Annual Report, and the annual report itself, constitutes an effective M&E tool.

## **9. Lessons learnt**

Our Darwin Scoping Award (2013) and following pre-project trial (UHRC/HiU Coffee) was vital for establishing the project and validating proof of concept. Likewise, Kew/ECFFs DFID funded (SCIP Project) Building a Climate Resilient Coffee Economy for Ethiopia gave us a head-start in terms of understanding the resilience landscape and key issues for coffee farmers in Illubabor. As identified in the SCIP project, it is critically important to listen carefully and spend time with the stakeholders (i.e. farmers), and to ask their opinions on advice on key aspects of the project. Following on from this, a certain amount of flexibility is essential, so that learning and discovery can be incorporated to best achieve project outcomes. For example, putting the cupping lab and having the school teachers as the coffee trainers was not in the detail of our plan for 2015/16, but the decision to use this opportunity has had greater impact than originally envisaged.

After reviewing other 'Climate Smart' projects, and after talking to farmers, we learnt that it is essential take into account the actual cost (\$) of adaptation and its benefit (income and resilience) to farmers. On the basis of this learning, our climate resilient plot studies now include and a cost-benefit analysis component.

The workshops clearly identified that the coffee farmers of Yayu needed no further persuasion that the Yayu Reserve was an important and valuable resource. This is mainly due to previous work of ECFF, but also because of fundamental understanding of the benefits of the forest environment. The community must, however, also see tangible income benefits from preserving forest-based production systems.

We are not making any significant changes to next year's activities.

## **10. Actions taken in response to previous reviews (if applicable)**

Not applicable.

## **11. Other comments on progress not covered elsewhere**

We made a Change Request to spend funds not spent for Kew staff time, to build a cupping lab at Wutate School. The original building designated for this purpose was found to be unsuitable for this purpose. The meant Kew and ECFF project participants taking up extra duties for plot design and implementation, in absence of the previously designated field-researcher (Kew).

One major issue is the lack of potable water for the cupping lab (water would have to be carried in for this purpose). We are scoping and costing the possibility of bringing water to the cupping lab (and the school community) via pipework from the mains supply.

## 12. Sustainability and legacy

We are hoping that the project will serve as a model for similar coffee projects within Ethiopia and beyond. At the very least we hope to share the major lessons learnt for mainstreaming biodiversity and farmer/community climate resilience. Coffee farmers from the private sector are already showing interest in our project and we already shared our experiences and expertise. After Year 1 the exit strategy is still valid, and there are strong indications that it could work.

## 13. Darwin Identity

Kew are in the process of constructing the project webpage for the project. Union coffee have a retail page for the coffee and separate Yaya project blog. UHRC also have a dedicated project coffee (Yayu Wild Forest Coffee). Now that we are confident that the project is delivering as anticipated, we are investigating the possibility of putting the Darwin logo, and perhaps brief project details, on retail coffee packs. A retail pack has now been designed and is awaiting approval.

We are also planning a display in Kew's Victoria Gate café, with images and text detailing the Yaya Darwin project. We are also in advanced negotiations for selling the Yaya Wild Forest Coffee at the café (as a filter coffee) with retail packs available at the Kew's Victoria Gate shop (see above).

## 14. Project Expenditure

**Table 1 Project expenditure during the reporting period (1 April 2015 – 31 March 2016)**

Project spend (indicative) since last annual report	2015/16 Grant (£)	2015/16 Total Darwin Costs (£)	Variance %	Comments (please explain significant variances)
Staff costs (see below)			11	
Consultancy costs			0	
Overhead Costs			11	
Travel and subsistence			2	Cheaper tickets and hotels, etc.
Operating Costs			2	Cost savings.
Capital items (see below)			-10	
Others (see below)			500	Re-allocation of costs from other cost categories. Large percentage; small value.
<b>TOTAL</b>				

## Annex 1: Report of progress and achievements against Logical Framework for Financial Year 2015-2016

Project Summary	Measurable Indicators/verifications	Progress and Achievements April 2015 - March 2016	Actions required/planned for next period
<p><b>Impact</b> Reduce poverty and provide short- to long-term resilience for coffee farming communities and their environment at the UNESCO registered Coffee Forest Biosphere Reserve, through self-sustaining financial mechanisms.</p>			
<p><b>Outcome</b> Five coffee cooperatives in the UNESCO registered Yayu Coffee Forest Biosphere Reserve, move to sustainable and resilient livelihoods, whilst conserving local biodiversity.</p>	<p>1. A 30% increase in cash income for the 950 Yayu coffee cooperative members (5 cooperatives), by Year 3. <a href="#">[Invoices and accounts detailing the volume and value of exported coffee for each of the 950 cooperative members]</a></p>	<p>A 21 to 29 % increase across all 950/784 households. See Point 6 of main report for more details.</p>	<p>Increase in coffee production (towards a target of 25% increase in purchasing on previous year, by Year 2) whilst retaining quality. Find mechanisms to better understand and measure increases in value/income for Yayu farmers</p>
	<p>2. A 25% increase in seasonal employment for household members of the Yayu cooperatives, by Year 2. <a href="#">[Accounts showing the number of extra coffee sector workers]</a></p>	<p>An estimated 40% increase in seasonal labour for 2015/16.</p>	<p>Sustain and increase this figure in Year 2. Trainers to record number and gender of extra workers in Year 2.</p>
	<p>3. A 100% increase in the number of forest-cover surveys for Yayu Reserve, by Year 3. <a href="#">[Land-use change maps. A land-use change survey]</a></p>	<p>Basic forest cover surveys completed.</p>	<p>Detailed land-cover maps produced by end of Year 2.</p>
	<p>4. 20% of the 950 Yayu coffee cooperative members provided with a clear understanding of climate resilience/adaptation methodologies, by Year 3. <a href="#">[A mutually constructed climate resilience report for Yayu]</a></p>	<p>Not a Year 1 output. No anticipated progress.</p>	<p>Start writing resilience booklet text.</p>
<p>Output 1 Five Yayu coffee cooperatives provided with the equipment, training, supervision, and information</p>			

	resources, needed to improve (and sustain) coffee quality.			
1.1	Installation of coffee processing and evaluation (tasting and grading) equipment, for 5 cooperatives.	Five Yayu cooperatives are provided with the equipment required to correctly process and evaluate their coffee, in order to attain (and sustain) high quality, by Year 1. <a href="#">A signed receipt from each cooperative showing that they have received the coffee processing and evaluation equipment.</a>	Yayu Coops have agreed to the building of the Cupping Lab. Quotes received and materials ordered. Cupping lab equipment on order and awaiting construction of lab. Wutete School has signed an agreement for cooperative-wide use the facilities, and to provide training to all the members of the five cooperatives.	Coffee quality laboratory (Cupping Lab) built and equipped early by end of harvest season in Year 2.
1.2	Training of 950 cooperative members (5 cooperatives) in coffee harvest, post-harvest, and evaluation techniques.	950 cooperative members (for the 5 cooperatives) provided with the training, supervision, and information resources (including coffee processing handbook), needed to improve (and sustain) coffee quality. Training by project consultant, in the following modules: (1) Harvesting Techniques, (2) Processing Techniques, (3) Honey Coffee, (4) Processing Techniques, (5) Natural Coffee, (6) Drying Beds Management and Quality Control, (7) Storage and Packaging Techniques, (8) Drying, (9) Mill Selection and Grading Standards, (10) Quality Control, (11) Laboratory Management, (12) Coffee Cupping Training. By Year 2 and 3. <a href="#">A signed list of the producers/cooperative members that have received the benefits of training. Evaluation of coffee quality by UHRC at Yayu and in UK; quality report produced.</a>	Twenty-three trainers employed and trained. A total of 270 cooperative members trained in harvesting and processing techniques for natural and sun-dried coffees, drying bed construction, management quality control, and storage/packaging. The main objective this year was the selection and training of the teacher-trainers who will be undertaking training over the five cooperatives.	Scale up training, via the 23 (maximum 25) trainers, so that a total of 500 farmers have been trained. Trainers to record number and gender of people trained. Cupping training providing by HiU Coffee and UHRC.
1.3	Training of 950 cooperative members (5 cooperatives) on post harvesting techniques (washing and drying) and its evaluation.	950 cooperative members (households), c. 5220 individuals, with an annual increase in income of 30% (collectively £700,000; each household with an average increase of c. £735 p.a.), by Year 3. <a href="#">Invoices detailing the volume, type (processed</a>	A 21 or 29 % increase across all households; 950 and 784, respectively. This does not include the increase of 20% from switching trading union cooperative body. Around £400,000 pounds has been transferred to the Yayu community	A 25% increase in quality coffee purchased in Year 2, from the 2014/15 baseline. This outcome is climate dependent, due to El Nino influence, which was still in effect in early 2016.

		vs. unprocessed; type of processing) and price of exported coffee for each cooperative, showing the cash value increase against commodity prices and pre-project prices. Audit report/evaluation by socio-economist (Pascale Schuit), Part 1.	via project and pre-project (i.e. after Year 1 and the Darwin Scoping award). For further information see notes in Section 6.	
1.4	Production of draft reference and training manual for harvest and post harvest coffee farming techniques.	As output.	Production of draft reference and training manuals for harvesting, post-harvest processing and farming techniques, translated to Oromifa & Amharic.	Output complete.
1.5	Each cooperative member (950 in total) in possession of the Coffee Farming and Processing Manual.	As output.	Not a Year 1 output.	Printing and distribution to farmers and coffee workers of final version. A total 950 copies to be distributed.
1.6	Evaluation of coffee processing and coffee quality improvements.	As output.	Not a Year 1 output.	
1.7	Socio-economic and livelihood monitoring and evaluation.	As output. Audit report/evaluation by Socio-Economist (Pascale Schuit), Part 2.		
Output 2	Yayu household members (particularly women) are provided with access to training, and then employment within the local coffee sector.			
2.1	Training for 250 seasonal workers in coffee processing (90% female; 10% male).	12,000 square meters of drying bed equipment (Africans Beds) installed for five cooperatives, by Year 1. Invoices for purchase of materials and construction (labour hours) of drying beds.	5,850 square meters of drying bed materials (African Beds) installed for four cooperatives. Thus, 50% was installed in Year 1. The rest will be installed on Year 2.	Completion of drying bed installation (6,150 square meters of African Beds), proving all five cooperatives with the materials needed for quality coffee processing. Before Year 2 harvest.
2.2	Re-fresher training for 250 seasonal workers in coffee processing (90% female; 10% male).	250 (extra) household members trained in coffee harvesting and processing techniques, by Year 2. Signed receipts for wages received by seasonal workers. Report and account for householders (disaggregated by gender) seasonally employed within the five Yayu cooperatives, during the course	Not a Year 1 output, but an extra 40% seasonal workers were provided with the training required to meet the demands of an increase in output of high quality coffee.	Training of an extra 250 (mostly female) workers or householders for quality harvesting and processing techniques.

		of the project (2015–2018) compared to pre-project (2010–2014).		
2.3	250 (extra) household members seasonally employed within the Yayu coffee sector, by Year 2.	250 (extra) household members seasonally employed within the Yayu coffee sector, by Year 2. <a href="#">As above.</a>	Not a Year 1 output, but see directly above.	Employment of an extra 250 householders (mostly female) for working in coffee harvesting and processing.
Output 3	An area (land-use) analysis of forest and forest-based household income areas for the Yayu UNESCO MAB Reserve.			
3.1	Construction of land-use vegetation map for the Yayu area using RapidEye data (5 m resolution).	One Ethiopian GIS technician trained/supported in advanced land-use change technology and methodologies, by Year 1. <a href="#">Maps showing forest change over a six year period (2012–2018) at 5m resolution, and 18 year period (2000–2018) at 30 m resolution.</a>	Support provided on-line for Ethiopian GIS technician by J. Moat (and Kew GIS Team members) and in-country (A. Davis). Land-use vegetation map for the Yayu area (using RapidEye and other data sources) completed. Kabela boundaries added.	Output completed but further support to come in Year 2.
3.2	Construction of land-use vegetation map for the Yayu area using Landsat and Modis data (30 m resolution).	Three Land-use change maps produced for Yayu Reserve, by Year 2. <a href="#">As above.</a>	Not a Year 1 output.	Acquire and add Modis data for the more detailed land-use change analysis.
3.3	Construction of narrative report to accompany map, and production of final report disseminated to stakeholders.	One New forest-cover survey produced for Yayu UNESCO MAB Reserve, for bench-marking and assessing forest-cover (vegetation) change, by Year 3. <a href="#">Accompanying land-use change survey.</a>	Not a Year 1 output.	Work on this output to commence in Year 2.
Output 4	Yayu coffee cooperative members are provided with the training and information resources required for on-farm climatic resilience.			
4.1	Set-up of study plots on 3 Yayu farms to measure the influence of different shade and mulching regimes, and other feasible on-farm adaptation methods, using environmental monitoring equipment.	Three Yayu farm plots (1 ha) provided with, and participating in, on-farm climate adaptation trials, by Year 1. <a href="#">A signed list of the producers/cooperative members that have received the benefits of resilience training and field trials.</a>	Three plots set up, to assess the influence of: (1) mulching, (2) stumping and (3) pruning. Plot 4 under discussion and review.	Maintain plots 1, 2 and 3. Set up forth plot.

4.2	Evaluation of study plot data using statistical and other analytical methods, to assess the precise outcomes for individual and combined adaptation methods.	On-farm adaptation evaluation provided for three Yayu farm plots, and this broadened to provide an overview of climate resilience at Yayu. Results incorporated into a peer-reviewed publication, by Year 3. <a href="#">As above.</a>	Not a Year 1 output.	Add further apparatus, and collect data from Plots 1, 2 and 3.
4.3	Demonstration workshops to each of the 5 Yayu cooperatives on on-farm adaptation methodologies.	5 Yayu cooperatives provided with training in, and information resources for, on-farm adaptation, by Year 3. <a href="#">On-farm, climate adaptation report/survey for Yayu, plus one open access, peer-reviewed scientific paper in draft.</a>	Not a Year 1 output.	Not a Year 2 output, but start planning for Year 3.
4.4	Construction of first draft (laser-printed) of on-farm climate adaptation chapter.	As output.	Not a Year 1 output.	Not a Year 2 output, but start planning for Year 3.
4.5	Construction of first draft of scientific paper, concerning on-farm adaptation.	As output.	Not a Year 1 output.	Not a Year 2 output, but start planning for Year 3.

## **Annex 2 Project's full current logframe as presented in the application form (unless changes have been agreed)**

### Impact

Reduction in poverty via increased income: c. 5,225 individuals (= 950 cooperative members (households) with an average of 5.5 members per household); c. 2,600 women.

Reduction in poverty via employment: 250 seasonal workers; c. 200 women.

Projects full and current log-frame incorporated into Annex 1, in order to avoid repetition. Projects assumptions stated and supported in Section 3.4.

## Annex 3 Standard Measures

**Table 1 Project Standard Output Measures**

Cod e No.	Description	Gender of people (if relevant)	Nationalit y of people (if relevant)	Year 1 Total	Year 2 Total	Year 3 Total	Total to date	Total planne d during the project
5	Three years training and support for GIS support person	Male	Ethiopian	1	1	1	1	
6A	Coffee trainers, each receiving five days training	57 % male; 53 % female	Ethiopian	23			23	25
6A	Farmers/coffee workers each receiving one day's training	60 % female; 40 male [estimated ]	Ethiopian	270			270	950
14A	One two day workshop at Wutate cooperative (October 2015)	40% female, 60% male	Ethiopian	20			20	50
14A	Ad hoc short workshops/discussion s with four cooperatives.	80% male, 20% female	Ethiopian	20			20	50
20	Coffee processing and evaluation equipment, and scientific apparatus			£33,829			£33,829	£34,000
21	Cupping Lab						1	1
23	Non salary input from UHRC		English Dutch Panamanian	£23,500 (include original budget sum of £9,045)			£23,500	£32,384
23	Salary input from UHRC (as per budget)			£32,000			£32,000	£96,000

**Table 2 Publications**

To come in Years 2 & 3.