

## *Darwin Initiative Annual Report*

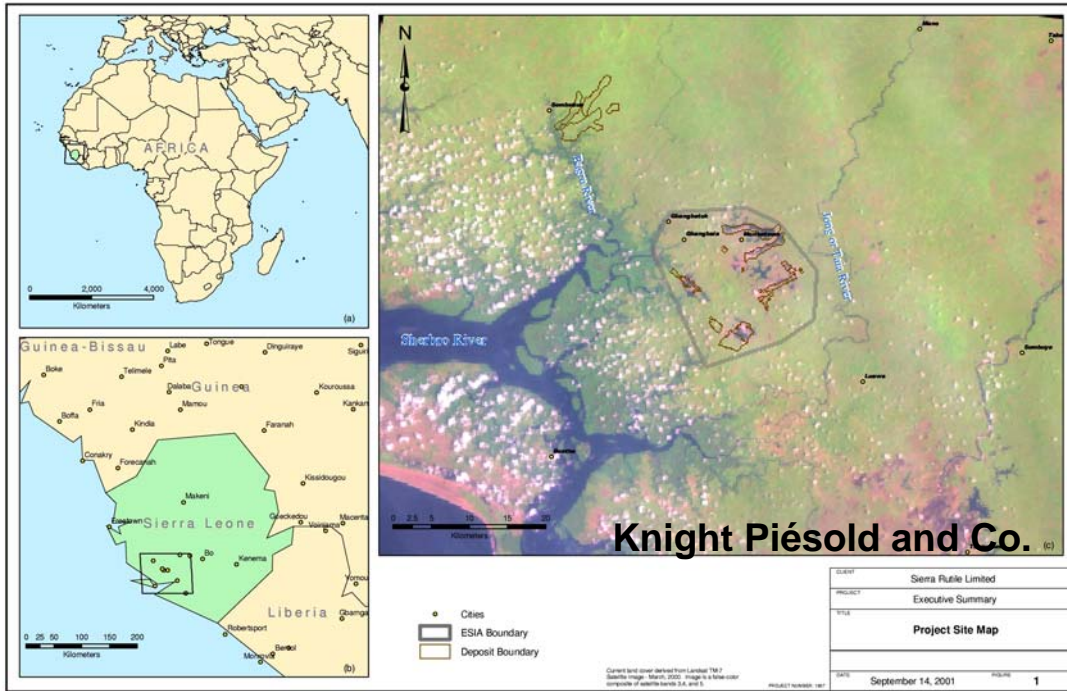
### **Darwin Project Information**

Project Ref Number	15/031
Project Title	Novel and practical conservation strategies following mining in Sierra Leone
Country(ies)	Sierra Leone
UK Contract Holder Institution	Centre for Ecology and Hydrology
UK Partner Institution(s)	Mind the Gap
Host country Partner Institution(s)	Environmental Foundation Africa (EFA) Fourah Bay College (FBC) Njala University (NU) Community Advocacy and Development Movement (CADEM)
Other International Institution(s)	Conservation International (CI)
Darwin Grant Value	£164,408
Start/End dates of Project	1st Nov 2006 to 31st Oct 2009
Reporting period (1 Apr 2006x to 31 Mar 2007y) and annual report number (1,2,3..)	1 November 2006 - 31 March 2007 Annual Report No. 1
Project Leader Name	Jan Dick
Project website	
Author(s), date	Jan Dick, Tommy Garnett, Scott Jones, A. B. Karim. Kabbie Kenu, Leslie Mboka, Eduard Niesten, Pious Sesay, James Sundufu, Richard Wadsworth & Arnold Williams March 2007

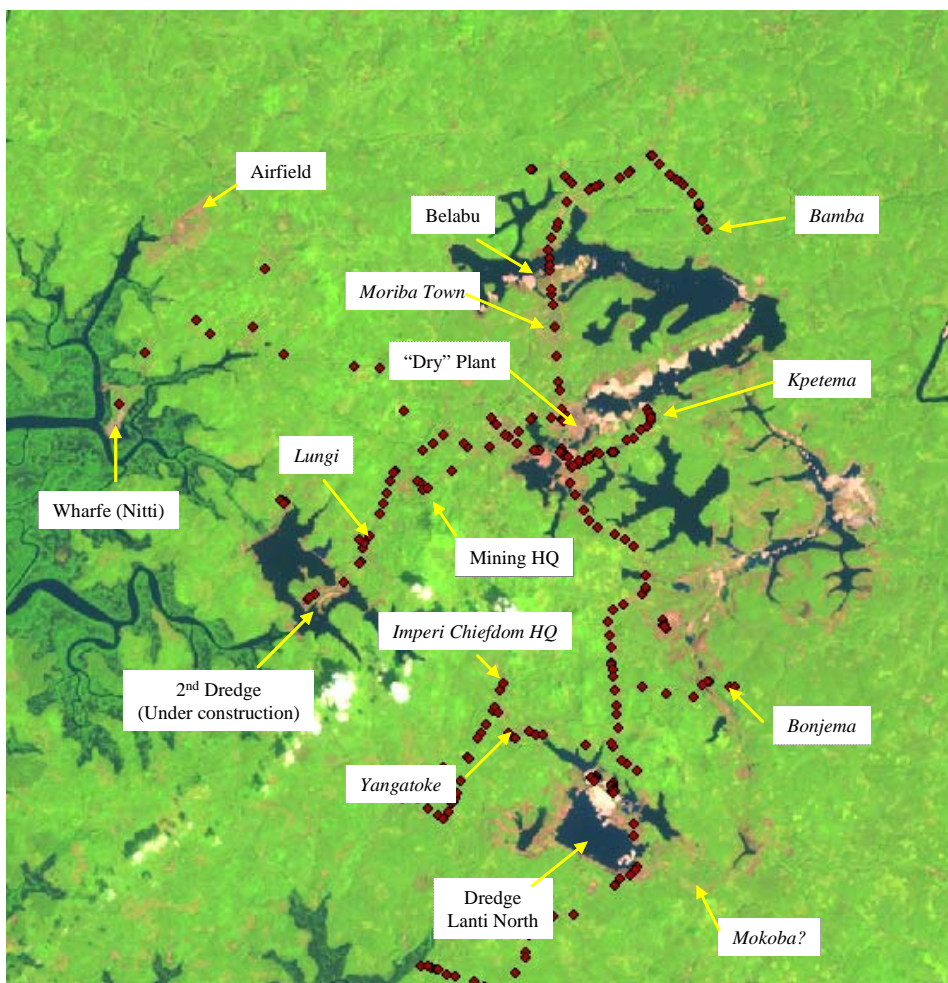
### **1. Project Background**

The aim of this project is to develop practical methods for successful reclamation and conservation following mining in developing countries that both conserve biodiversity and enhance community livelihoods, using a mining enterprise in Sierra Leone as a case study.

The focus of the project will be to integrate current scientific information with local knowledge through a partnership between CEH (UK), NGOs, local communities, a mining company and two universities (Sierra Leone).



**Figure 1 Map of study area (Sierra Rutile Mining Concession) supplied by Knight Piesold and Co.**



**Figure 2 Satellite image of mining area and participating villages (area shown approximately 20km across)**

## 2. Project Partnerships

One of the strengths of this project is the wide range of partners from the host country and the UK, including research centres, NGOs, universities both in UK and in Sierra Leone, industry in the form of the mining company and local communities. The strengths of this broad range of partners are the diversity of perspective that can be included in the project design and development and the level of participation at local level that can be achieved. There were some initial differences in understanding of the aims and scope of the project and the team has tried to manage expectations, particularly at a local level and given the short timescale of the project. The real participation of partners is seen from the authorship of production of reports for the different parts of the project.

The in country CBD focal person at the start of the project was Dr Libby. Dr Libby was actively involved in the project design. However, he has since moved to Liberia and the team is pursuing the new CBD focal point and will correspond with them over the next quarter.

One of the primary aims of this project is to support capacity building in Sierra Leone such that its citizens can contribute meaningfully to meeting the countries commitments to the Convention of Biological Diversity. Therefore the over arching management principle of this project is the participation of all parties. It is recognised that effective participation encourages ownership of project design and outcomes by the communities and mining company SRL while still satisfying the scientific rigour required by the academic participants.

Our project commenced a week after the official start date of the project (1 Nov 2006) with a series of meetings and workshops in which all participating organisations were represented (Table 1).

**Table 1 List of core project staff and their role within the project.**

Name	Affiliation	Primary role
Dr Jan Dick	CEH	Project manager
Dr Richard Wadsworth	CEH	Landscape monitoring
Dr Sundufu	Njala University	Reclamation technologies
Pious Abu Bakark Sesay	Njala University	Reclamation technologies
Dr A B Karim	Fourah Bay College	Reclamation technologies
Mr Arnold Okoni Williams	Fourah Bay College	Reclamation technologies
Mr Kabbie Kenu	Fourah Bay College	Reclamation technologies
Mr Leslie Mboka	CADEM	Interactions between stakeholder groups
Ms Jestina Jusu	CADEM	Interactions between stakeholder groups
Dr Scott Jones	Mind the Gap	Interactions between stakeholder groups
Mr Eduard Niesten	Conservation International	Ecosystem payments
Mr Tommy Garnett	EFA	In-country manager
Ms Evy Wilkins	EFA	In-country manager
Mr Eugene Cole	EFA	In-country manager
Mr Kasier	EFA	Project finances
Mr Mohamed Fortune	EFA	Logistics

Four technical workshops were held in four nucleolus villages with a total 324 participants from 14 villages (Table 2). The villages are distributed across the whole mining concession (Figure

2) and a full spectrum of impacts from not yet unaffected (Lungi) to highly affected (Kpetema), from long-established (Bonjema) to relocated (Bamba) A full list of participants is detailed in the reported produced by the university partners Dr. A.B.Karim, (FBC), Dr. A.J.Sundufu (NU) Mr. A. Okoni-Williams (FBC) and Mr. K. Kanu (FBC) Report on Technical Workshops conducted at Sierra Rutile Operational Areas 13<sup>th</sup> – 17<sup>th</sup> November 2006.

**Table 2 Dates, locations and villages involved in the technical workshop**

Date	Workshop Location	Villages involved	No. of participants
13 <sup>th</sup> November	Lungi	Lungi Gangama Semabu Junctionla	73
14 <sup>th</sup> November	Kpetema	Kpetema Bamba Ndenemoya Mokepe	85
15 <sup>th</sup> November	Yangatoke	Yangatoke Foinda Gbangbama Madina	97
16 <sup>th</sup> November	Bonjema	Bonjema Bandagulahun Varma Bandavela Shembike Gbgama	69

This participatory approach inevitably resulted in less forward planning than is normal in such projects. Decision were made and acted upon during the project teams stay in Sierra Leone when all parties had been consulted. It was considered vital not to push either the communities or the mining company into a position where they suspected that decision had been made before they were fully consulted. In general this approach was welcomed by all parties and we are committed to ensuring that full participation by all parties in all major decisions remains the normal management practise. By working with such a diverse group of NGO's, Universities, communities and industry partners the UK lead institution has built its own capacity to be an effective project partner.

Many of the host country partners have effective working relations with local and regional partners. The project was invited to present the project at 'The Environmental Forum for Action' (ENFORAC). Formed in 2004 ENFORAC is a coalition of environmental NGOs, community groups and academic organisations who have come together as a united voice to maximize their impact on policy, management and behavioural change for a healthy environment in Sierra Leone. EFA, CADEM and both university partners are members of ENFORAC. The group welcomed our project and we agreed to circulate our reports to members of the group to inform and foster further collaboration with other ENFORAC members.

### 3. Project progress

### 3.1 Progress in carrying out project activities

The first six months of this project has been highly successful. The majority of the activities have been carried either directly as stated in the proposal or altered at the request of local project partners. For instance in addition to the initial workshop with UK team members in November an additional visit was made to the study site in December 2006 by Richard Wadsworth (see report Wadsworth and Kanu 2006). The need for consensus building was fully appreciated at the initial workshop so with additional support of the mining company (£6200) Scott Jones has developed an additional workshop.

It was agreed at the initial project meeting that each member of the DARWIN team would formally report their activities allowing clear ownership of the work to be recognised. These reports are included as appendixes to this annual report. The main activities are outlined below.

A 15 person team was assembled in Sierra Leone during the first two week of the project and the following actives were achieved

- Constructive consultation with communities, mining company and government representatives'
- Participatory joint stakeholder workshop at the mining site
- Four technical workshops in four key villages with representatives from several surrounding villages
- Demonstration plots designed and agreed with SRL management and village communities (16 \* 0.25 ha)

The hypothesis of the first year demonstration plots was agreed 'Addition of organic matter in the form of compost and mulch to the highly impoverished and disturbed soils in the SRL concession increase crop productivity'

- Preliminary stakeholder analysis was conducted
- Assessment of environmental service payment options for SRL were formulated
- Assessment of land cover in the mining area was determined

In general there was considerable cooperation from all stakeholders, especially the communities. SRL staff showed a high level of understanding in dealing with the issues that were discussed, especially those relating to the communities.

The landscape monitoring component of the project made use of "cutting-edge" technology being developed in the UK for the next land cover map of the UK; this technology (interactive mapping on touch sensitive screens) proved to work well in Sierra Leone although there are still a few programming issues to resolve. The system could be mastered in only a few minutes and the design of the software allowed new (and alternative) categories to be included simply and easily (reflecting the users perception of the landscape). Several hundred data points have been collected by 6 partners. We were able to confirm that the satellite data were capable of distinguishing different types of mangrove swamp (which has implications for the conservation concession component – see report by Neisten and Wadsworth 2006). Unfortunately, much of the landscape around the mining site does not contain any particularly rich biodiversity; the most challenging aspect is to distinguish different types and intensities of degradation. Training of university students (which was envisaged in the project proposal) has been hampered by the fact that none of the key equipment (2 laptops, digital camera, hand held GPS unit) left by the last Darwin project is still functioning. Therefore formal GIS training was changed to 'on the job' training during field visits where practical experience could be gained.

The Darwin Team also held a technical meeting in Freetown following the trip to the mining area in which arrangements for the experimentation of the restoration programme were concretized.

After the workshop there was some initial hesitancy by the communities to dig compost pits but following community mobilization activities by local partner's seven villages have now commenced compost making in a total 30 compost pits (Table 3).

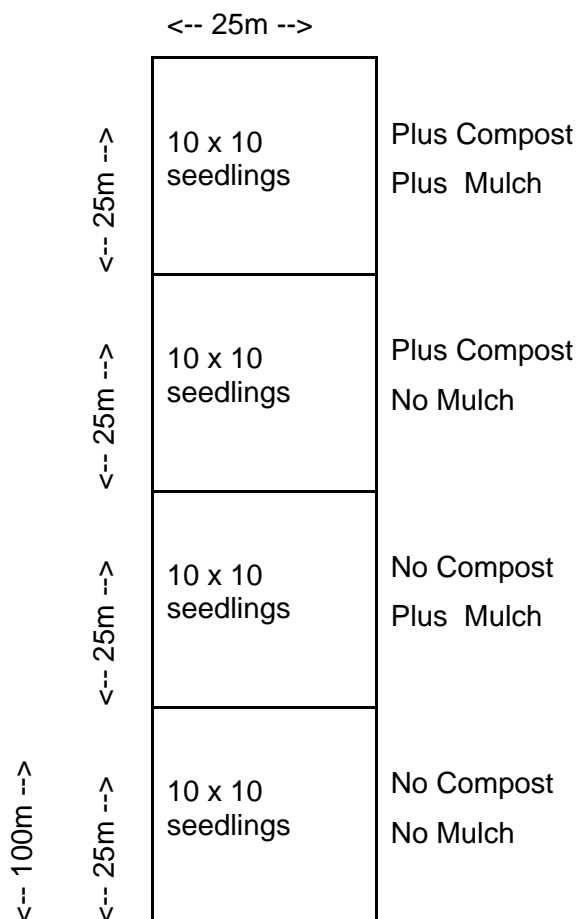
**Table 3 Number and location of compost pits established by March 2007**

Village	No. of Pits
Kpetema	6
Ndedemoya	4
Bamba	4
Yangatoke	4
Bojeima	4
Madina	4
Foinda	4

### **3.2 Progress towards Project Outputs**

This project is testing a decentralised business initiative which is new for both the villagers and the mining company (compost making, seedling production and payment for ecosystem services). To date the progress has been very encouraging with both the villagers and mining officials embracing the concept but expectations are high and we are aware that there may be a period where unrealistic expectations will not be met. It must be noted however, that this project will still be deemed successful even if our initial decentralised business models are not adopted – this is a participatory and flexible project and the models tested here will inform future work.

Our strategy of dispersed demonstration plots allows maximum participation in the surrounding area while permitting incomplete planting in the first year; i.e. we have planned each plot as a complete unit and therefore all 16 do not need to be planted in order to extract some useful results. Figure 3 provides a schematic of the basic layout of a single plot. We fully recognise that the DARWIN team are not controlling this project rather we are encouraging both the mining company and the local villagers to formulate restoration techniques suitable for them while establishing statistically robust demonstration plots. The local villagers will decide the species to be planted and as long as the lines of planting are followed through all soil treatment (vertically on diagram below) the most successful strategy will be identified. The extreme treatments (i.e. no compost and no mulch) are include in this first year as we aim to demonstrate from first principles what is required to rehabilitate the mining area (effects should be obvious and not require complex analysis to determine treatment effects).



**Figure 3 Diagrammatic representation of the experimental rehabilitation plots**

In total 16 demonstration plots were agreed with mining officials and local villagers (Table 4). All the plots have not yet been formally identified so it is anticipated that this list may change prior to the planting season.

The four plots at Lanti North will be divided equally between the white and brown sand (2 each) and the plots at Yangatoke and Bamba/Kpetema will be located in consultation with villagers. In December 2006 7 plots were set out (4 at Lungi, 2 at Bonjema and 1 at Lungi) to demonstrate a) the method of setting them out and b) just how big the plots are. It is only after seeing how big the plots are that people can start to visualise how much compost and seedlings the company is going to have to buy.

**Table 4 Location of the 16 experimental rehabilitation plots in the SRL concession area.**

	Borrow Pits (Laterite)	Sand tailings
Lanti North	0	4
Bamba/Kpetema	2	2
Lungi	2	0
Yangatoke	2	2
Banjema	2	0

### 3.3 Standard Output Measures

**Table 5 Project Standard Output Measures**

Code No.	Description	Year 1 Total	Year 2 Total	Year 3 Total	Year 4 Total	TOTAL
14 A	1 joint stakeholder workshop 4 village workshop (November) 4 village workshops December (compost making and seed production)	9				
4A	1, reclamation & composting technologies	1				
4B	4 weeks	4				
4A	3, Njala, mapping, RS, GIS & GPS	0				
4B	2 weeks	2				
4C	3, field based, monitoring and assessment of field plots and ecosystem service areas.	1				
4D	2 weeks	2				
7	4 in draft form for further refinement ("Guide to monitoring, mapping & classifying on land with ecosystem services payments", "Guide to the protocol for assessing vegetation plots", "Guide to composting", "Guide to reclamation").	2				
8	8 weeks (from 3 UK staff)	10				
14B	1 Attended 'Incorporating the Ecosystem Approach in the Conservation of Biodiversity' Royal Botanic Garden, Edinburgh 2 March 2007 Project poster presented	1				
15A	1	1				
18A	1	0				
19A	1	0				



**Table 6 Publications**

Type *	Detail	Publishers	Available from	Cost £
(eg journals, manual, CDs)	(title, author, year)	(name, city)	(eg contact address, website)	

**3.4 Progress towards the project purpose and outcomes**

The purpose of our project was: To develop methods for practical reclamation and conservation for mining enterprises in developing countries that both conserve biodiversity and enhance community livelihoods, using a mining enterprise in Sierra Leone as a case study. We have made significant progress to achieving this purpose in the first six months of this project.

The mining company and the local people are fully engaged with the project. At the moment the purpose level assumptions are holding true and the indicators are adequate towards measuring outcomes.

**3.5 Progress towards impact on biodiversity, sustainable use or equitable sharing of biodiversity benefits**

By actively engaging in restoration technology and ecosystem service payment models mining officials and local villagers are becoming more aware of impact on biodiversity, sustainable use or equitable sharing of biodiversity benefits. Local people are primarily interested in biodiversity with livelihood benefits while the mining company are beginning to understand the idea of ecosystem service payments. It is too early to say yet if the mining company will fully embrace this concept.

**4. Monitoring, evaluation and lessons**

Each partner is producing written reports of their activities which are included with this report. These will serve the purpose of demonstrating to a reviewer the full activities and commitments of the partners. Within these reports are details of the local community participation in the project. The fact that the mining company have committed an additional 0.25 ha demonstration planting plot plus £6200 towards a consensus building workshop is also an indicator of the projects achievements.

The over arching management principle of this project is the participation of all parties. Effective participation encourages ownership of project design and outcomes by the communities and mining staff while still satisfying the scientific rigour required by the academic participants. This inevitably resulted in less forward planning than is normal in such projects which resulted in the team 'learning by doing'.

The participatory nature of this project has led to very high expectations by all the project participants. Everyone would like to do more work than is possible in the restricted budget. This situation requires active management explaining the limitations of the project and encouraging additional funding from other sources.

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

Not applicable this is first annual report.

**6. Other comments on progress not covered elsewhere**

As the design of this project is flexible we are continually refining methods depending on local consultation. For example a need became evident for capacity building for positive engagement, collaboration and partnership working between the mining company Sierra Rutile Ltd (SRL), local communities, NGOs and the DARWIN team. This need was recognised by the mining company who offered £6500 contribution to facilitate a workshop in May 2007. The key aim of the workshop will be participatory and practical – not an academic exercise, but one that is anchored in the realities facing the company and local people.

The need for additional local support was recognised during the project start up meetings and one of the project partners Mind the Gap funded a local liaison officer to work with the local communities.

Elections will be held in Sierra Leone in May and we recognise that this may present a problem but none is currently forecast..

## **7. Sustainability**

This project commenced in November 2006 and there is a clear desire by all parties to protect and enhance biodiversity while enhancing livelihoods. The project partners are facilitators giving ownership of the project to the local people and the mining company. This policy will ensure a clear exit strategy. It must be remembered that the models tested in this project may not be successful but that alone will be deemed useful additional knowledge as the strategies tested here are considered by all parties at the moment as the most likely to succeed.

## **8. Dissemination**

Dissemination of project knowledge is at a local scale in this initial year but already other associated mining areas have shown an interest in our approach i.e. local bauxite mining company. National newspapers covered the start of the project and we are working with local partners to produce a video.

## **9. Project Expenditure**

## **10. OPTIONAL: Outstanding achievements of your project during the reporting period (300-400 words maximum). This section may be used for publicity purposes**

[I agree for ECTF and the Darwin Secretariat to publish the content of this section](#)

## Annex 1 Report of progress and achievements against Logical Framework for Financial Year: 2006/07

Project summary	Measurable Indicators	Progress and Achievements April 2006 - March 2007	Actions required/planned for next period
<p><b>Goal:</b> <i>To draw on expertise relevant to biodiversity from within the United Kingdom to work with local partners in countries rich in biodiversity but constrained in resources to achieve</i></p> <p><i>The conservation of biological diversity,</i></p> <p><i>The sustainable use of its components, and</i></p> <p><i>The fair and equitable sharing of the benefits arising out of the utilisation of genetic resources</i></p>		<p><i>(report on any contribution towards positive impact on biodiversity or positive changes in the conditions of human communities associated with biodiversity eg steps towards sustainable use or equitable sharing of costs or benefits)</i></p>	<p><i>(do not fill not applicable)</i></p>
<p>Purpose</p> <p>To develop methods for practical reclamation and conservation for mining enterprises in developing countries that both conserve biodiversity and enhance community livelihoods, using a mining enterprise in Sierra Leone as a case study</p>	<p>Identification of successful technologies for the re-vegetation of mining spoils.</p> <p>Number of people obtaining financial rewards from the mining operation to enhance re-vegetation of the mining area increased, thus raising awareness of biodiversity in the region.</p>	<p>Seven villages actively participating in the project</p> <p>The hypothesis of the first year demonstration plots was agreed. It will be 'Addition of organic matter in the form of compost and mulch to the disturbed soils in the SRL concession increase crop productivity'.</p> <p>The crops and trees planted will be decided by the villagers.</p> <p>Many villagers are producing</p>	<p>Formalise the purchase of compost and seedlings by SRL from the communities.</p> <p>Oversee planting the demonstration plots</p> <p>Monitor growth and biodiversity of plots</p>

		seedling and compost for these plots. The financial rewards have not yet been finalised although work is well advanced.	
Output 1. Model for decentralised business initiatives (planting stock production and composting) developed and demonstration plots established	Model adopted by local people and mining company following this project	Local people are currently engaged in the production of compost and rising of seedlings which SRL have agreed to purchase. An excellent start has been made but it is recognised that the model we are testing this year may need to be amended through the lifetime of this project.	
Activity 1.1 1.1 Develop decentralised business strategy with stakeholders		A series of workshops were held where price and method of payment was discussed. The price will be agreed in the next reporting period and communities and company representatives will be surveyed to determine successful and unsuccessful aspects.	
Activity 1.2, etc 1.2 Training and development of appropriate methods for stock production and composting using workshops and mentoring		A total 324 participants from 14 villages attended 4 technical workshops	
Activity 1.3. Establish demonstration reclamation plots		The distributed nature of the experimental design (requested by the villagers) necessitated the planting of 16 plots i.e. one more than in the proposal. We are very grateful to SRL for funding this additional plot on top of the 15 already agreed.	
Output 2. Cheap, effective method for monitoring ecosystem payments established	Report of method tested and suitability for purpose assessed	Preliminary work conducted to identify area subjected to ecosystem services.	

Activity 2.1. Develop monitoring methods		To date satellite imagery has been procured of the suggested areas potentially subjected to ecosystem service payments
Activity 2.2. Collect and analyse monitoring data		Work in this area will depend on out come of discussions with SRL management
<b>Output 3.</b> etc, Assess potential forms of ecosystem payments	Survey mining company and local community. Consolidate data and compare to similar initiatives.	Five models for ecosystem payments have been presented in report form to SRL
Activity 3.1. Workshop		During the introductory workshops informal discussions were held with relevant stakeholders
Activity 3.2. SWOT analysis and consensus building to identify preferred options		Full analysis with five options resulted from consultation exercise
<b>Output 4.</b> Relationships between stakeholders improved and partnerships built for future interactions	Initial and final stakeholder analyses	Initial informal stakeholder analysis conducted in November 2006
Activity 4.1. Workshop with project facilitators and team members to develop appropriate facilitation methods to reduce conflict and build relationships throughout all project activities. (Nov 2006)		Initial visit to the area found a real need to facilitate conflict resolution. Additional funding was sought from SRL (£6500) to fund additional workshop scheduled for may 2007.

## Annex 2 Project's full current logframe

Project summary	Measurable Indicators	Means of verification	Important Assumptions
<p><b>Goal:</b></p> <p>To draw on expertise relevant to biodiversity from within the United Kingdom to work with local partners in countries rich in biodiversity but poor in resources to achieve</p> <ul style="list-style-type: none"> <li>• the conservation of biological diversity,</li> <li>• the sustainable use of its components, and</li> <li>• the fair and equitable sharing of benefits arising out of the utilisation of genetic resources</li> </ul>			
<p><b>Purpose</b></p> <p>To develop methods for practical reclamation and conservation for mining enterprises in developing countries that both conserve biodiversity and enhance community livelihoods, using a mining enterprise in Sierra Leone as a case study</p>	<p>Identification of successful technologies for the re-vegetation of mining spoils.</p> <p>Number of people obtaining financial rewards from the mining operation to enhance re-vegetation of the mining area increased, thus raising awareness of biodiversity in the region.</p>	<p>Mining company adopts successful technologies</p> <p>Survey of local people</p>	<p>Mining company seriously committed to reclaiming mining soils</p> <p>Local people seriously committed to delivering service to mining company</p>
<p><b>Outputs</b></p> <p>Model for decentralised business initiatives (planting stock production and composting) developed</p> <p>Demonstration reclamation plots established using different setup methods</p>	<p>Model adopted by local people and mining company following this project</p> <p>Plots established – minimum 15 plots 0.25 ha each in each of three years</p>	<p>Survey of local people</p> <p>Photographs in reports and ground- truthing by project team</p>	<p>Both parties honest and transparent in their business dealings</p> <p>Local people deliver plants and compost of required quality and quantity in a timely manner</p>

<p><b>Best local purpose method for establishing demonstration plots determined through testing</b></p>	<p><b>Analysis of methods tested</b></p>	<p><b>Reports and published articles</b></p>	<p><b>Methods tested are appropriate. Currently SRL committed to planting exotic species with proven successes. Testing indigenous species new initiative but as we will test both approaches it is unlikely that we will fail completely</b></p>
<p><b>Cheap, effective method for monitoring ecosystem payments established</b></p>	<p><b>Report of method tested and suitability for purpose assessed</b></p>	<p><b>Report to Darwin and published article</b></p>	<p><b>Remote sensing images available</b></p>
<p><b>Most appropriate form of ecosystem payment for local case study determined</b></p>	<p><b>Survey mining company and local community. Consolidate data and compare to similar initiatives.</b></p>	<p><b>Report to Darwin and published article</b></p>	<p><b>Both mining company and local community embrace the idea of ecosystem payments</b></p>
<p><b>Relationships between stakeholders improved and partnerships built for future interactions</b></p>	<p><b>Initial and final stakeholder analyses</b></p>	<p><b>Report to Darwin</b></p>	<p><b>Both mining company personnel and local people open and transparent in their willingness to interact.</b></p>

Activities	Activity milestones (summary of project implementation timetable)	Assumptions
<p><b><u>1. Reclamation technologies</u></b></p> <p>1.1 Develop decentralised business strategy with stakeholders</p> <p>1.2 Training and development of appropriate methods for stock production and composting using workshops and mentoring</p> <p>1.3 Establish demonstration reclamation plots</p> <p><b><u>2. Monitoring of area subject to ecosystem payment</u></b></p> <p>2.1 Develop monitoring methods</p> <p>2.2 Collect and analyse monitoring data</p> <p>2.3 Present and discuss results with stakeholders</p> <p><b><u>3. Assess potential forms of ecosystem payments</u></b></p> <p>3.1 Workshop</p> <p>3.2 SWOT analysis and consensus building to identify preferred options</p> <p>3.3 Implement preferred form of ecosystem payment by mining company</p>	<p>1.1a Decentralised business strategy agreed at min. 3 villages (Nov 2006).</p> <p>1.1b Monitor success of first years cycle (June 2007) Refine business strategy using focus groups and interviews etc.</p> <p>1.2a Workshops (Nov 2006) for suppliers. Encourage collaboration and engagement between villagers and SRL staff in the production cycle.</p> <p>1.2b Monitor and refine production process as appropriate (Nov 2007)</p> <p>1.3a Agree alternatives to be tested (Nov 2006); eg +/- compost, indigenous v. exotic species and untreated control.</p> <p>1.3b Review previous experience.</p> <p>2.1 Initial stakeholder workshop (Nov 2006) to discuss methodology.. Agree methodology to test (Jan 2007)</p> <p>2.2 Initial data collected and analysed by Nov 2007</p> <p>2.3 Results presented at a workshop of stakeholders Nov 2007 – methodology refined as appropriate and tested by Nov 2008. Refinements incorporated and results presented Nov 2009</p> <p>3.1 Workshop introducing existing ecosystem payment options, (Nov 2006)</p> <p>3.2 CI in partnership with all stakeholders gathers data and establishes context for at least three models of ecosystem service payment options</p> <p>3.3 Results of analysis presented to mining and community representatives. (Jan 2007)</p> <p>3.4 Decision from SRL representative whether to implement ecosystem service payment agreement (Oct 2007)</p>	<p>Both sides agree a price, quantity and quality of the products (planting stock and compost</p> <p>. The SRL and at least 6 villages in the region have expressed interest in testing this approach (Dick 2005 – report to IUCN).</p> <p>Both sides uphold their part of the agreement</p> <p>Villagers produce agreed products of high quality and in timely manner.</p> <p>SRL and villagers can agree on methodology to test</p> <p>Remote sensing imagines available</p> <p>Refinements suggested cost effective</p> <p>Mining company and local people open to changing the surface rent payment to an ecosystem payment</p> <p>There is a market advantage for the company to change to ecosystem services payment</p>



<b>Activities</b>	<b>Activity milestones (summary of project implementation timetable)</b>	<b>Assumptions</b>
<p><b>4. Facilitate consensus building</b></p> <p><b>4.1 Workshop</b></p> <p><b>4.2 Monitoring of stakeholder relationships through consensus building</b></p>	<p><b>4.1 Workshop with project facilitators and team members to develop appropriate facilitation methods to reduce conflict and build relationships throughout all project activities. (Nov 2006)</b></p> <p><b>4.2 Monitor stakeholder relationships through stakeholder analyses and interviews. (Dec 2006, Nov 2007 and Nov 2008)</b></p>	<p><b>Project team willing to accept consensus building approach</b></p> <p><b>Stakeholder honestly engage in monitoring exercises</b></p>

## Annex 3 onwards – supplementary material (optional)

The following reports are also submitted with this report.

Dick et al 2006 Report of initial project workshops

Karim et al. 2006 Report on Technical Workshops conducted at Sierra Rutile Operational Areas

Niesten and Wadsworth 2007 A Biodiversity Offset Proposal for Sierra Rutile Ltd.

Wadsworth and Kanu 2007 Report on Practical Workshops conducted at Sierra Rutile Operational Areas

Jusu 2007 Community Liaison Office report Nov2006 to Feb 2007

Mboka 2007 Status report of the Darwin Initiative project – CADEM

Jones 2007 Workshop preparation and field work update report

### ***Checklist for submission***

	Check
<b>Is the report less than 5MB?</b> If so, please email to <a href="mailto:Darwin-Projects@ectf-ed.org.uk">Darwin-Projects@ectf-ed.org.uk</a> putting the project number in the Subject line.	
<b>Is your report more than 5MB?</b> If so, please advise <a href="mailto:Darwin-Projects@ectf-ed.org.uk">Darwin-Projects@ectf-ed.org.uk</a> that the report will be send by post on CD, putting the project number in the Subject line.	
<b>Do you have hard copies of material you want to submit with the report?</b> If so, please make this clear in the covering email and ensure all material is marked with the project number.	
Have you completed the Project Expenditure table?	
Do not include claim forms or communications for Defra with this report.	