



Submit by 13 January 2006

DARWIN INITIATIVE APPLICATION FOR GRANT ROUND 14 COMPETITION:STAGE 2

Please read the Guidance Notes before completing this form. Applications will be considered on the basis of information submitted on this form and you should give a full answer to each question. Please do not cross-refer to information in separate documents except where invited on this form. The space provided indicates the level of detail required. Please do not reduce the font size below 11pt or alter the paragraph spacing. Keep within word limits.

1. Name and address of organisation

Name: Dr Jan Dick	Address: Centre for Ecology and Hydrology, Bush Estate, Penicuik, Midlothian, EH26 0QB, UK E-mail address: jand@ceh.ac.uk Phone:+ 44 (0) 131 445 4343 Fax:+ 44 (0) 131 445 3943
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2. Project title (not exceeding 10 words)

Novel and practical conservation strategies following mining in Sierra Leone
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3. Project dates, duration and total Darwin Initiative Grant requested

Proposed start date: 1st Nov 2006		Duration of project: 36 months		End date: 31 st Oct	
Darwin funding requested	Total	2006/07	2007/08	2008/09	2009/2010
	£164,408	£38,107	£48,242	£43,652	£34,407

4. Define the purpose of the project in line with the logical framework

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). Specific objectives are 1) to test decentralised business initiatives in a novel approach to reclamation technologies and to test the approach by planting demonstration plots for the reclamation of degraded mining sites, 2) to develop cheap, effective monitoring of conservation areas suitable for ecosystem payment models, 3) to assess different forms of ecosystem payment models and 4) to facilitate interactions between stakeholder groups to maximise consensus regarding implementable solutions.

5. Principals in project. Please provide a one page CV for each of these named individuals

Details	Project Leader	Other UK personnel (working more than 50% of their time on project)	Main project partner or co-ordinator in host country
Surname	Dick		Garnett
Forename (s)	Jan		Tommy

Post held	Senior Scientific Officer		Director
Institution	Centre for Ecology and Hydrology		Environmental Foundation for Africa
Department	Biosystems Management		

6. Has your organisation received funding under the Darwin Initiative before? If so, give details

<p>CEH has held several grants and participated in several projects from Darwin Initiative including:</p> <ol style="list-style-type: none"> 1. Sierra Leone; pre-project in collaboration with the partners cited in this proposal. <i>Selection, propagation, multiplication and distribution of indigenous tree species.</i> 2. Tibet; pre-project funding for <i>Sustainable management of burrowing mammals on the Qinghai-Tibetan Plateau. Summer 2004.</i> 3. Sierra Leone; project 162/11/006, in collaboration with Fourah Bay College, <i>Habitat Audit and Change Detection.</i> 4. Uganda; in collaboration with Kings College London and the Ugandan National Biodiversity Data Bank. <i>Biotope and habitat maps used as basis of species distribution maps of Sango Bay.</i> 5. Vietnam; in collaboration with the Field Studies Council and the National University of Hanoi and National Environmental Agency Vietnam. <i>Conserving Vietnam's biodiversity through improved water quality assessment and management.</i> 6. Vietnam; in collaboration with ECTF and Central Forest Seed Company <i>Preservation, rehabilitation and utilisation of Vietnamese montane forests</i> 7. UK; with ECTF, Monitoring and Evaluation Projects 8. Tanzania; <i>Combating Invasive Alien Plants Threatening the East Usambara Mountains in Tanzania in collaboration with Amani Nature Reserve (ANR), Tanzanian Forestry Research Institute, East Usambara Conservation Area Management Programme and Sokoine University of Agriculture Round 12 Ref. 13033</i> 9. Belize; <i>Developing Integrated Assessment of Biodiversity in Secondary Forest in Belize in partnership with Wildtracks. Round 13 Ref. 14025</i> 10. Russia; <i>Biodiversity information in the former Soviet Union. Project led by CABI. Round 7, ref 8011</i>
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7. IF YOU ANSWERED NO TO QUESTION 6 describe briefly the aims, activities and achievements of your organisation. (Large institutions please note that this should describe your unit or department)

Aims (50 words)
Activities (50 words)
Achievements (50 words)

8. Please list the UK (where there are partners in addition to the applicant organisation) and host country partners that will be involved in their project and explain their roles and responsibilities in the project. Describe the extent of their involvement at all stages, including project development. What steps have been taken to ensure the benefits of the

project will continue despite any staff changes in these organisations? Please provide written evidence of partnerships.

Environmental Foundation for Africa (EFA) is the host of the pre-proposal project, the previous main proposal, this proposal and they manage a grant from IUCN NL from which this proposal was developed. The IUCN NL grant aims to determine the major environmental and social issues related to the reopening of large scale and organised mining activities in Sierra Leone (value of grant \$28,897 approx £16,000). Tommy Garnett, Director of Programmes for EFA will continue to be the principal partner in this project in terms of project management and will also be responsible for supervising in country activities.

Local village elders (LVE) residing around the mining area represent the major stakeholders for this project; the local community. (The Mende are fairly unusual in that women Chiefs have always been relatively common, however, we will consult with other local groups and societies to ensure all sections of society can express their views). They were consulted by Jan Dick during her visit in November 2005 as part of the IUCN NL project. All six villages visited during the IUCN NL sponsored pre-project visit expressed an interest in producing planting stock and compost for SRL. They wanted to immediately discuss the business strategy. This enthusiasm leads the project team to believe the villagers will definitely take up the idea of producing planting stock and compost for SRL.

Fourah Bay College and Njala University (FBC & NU) (specifically the Departments of Biological Sciences). Both departments have experience (from before the war) in providing technical and scientific advice during the company's attempts at rehabilitation work. Dr Karim (FBC) and Dr Blyden (NU), the two heads of department, were CEH / EFA's first contacts during development of the IUCN NL project concept, and are currently key players in that study, to investigate the environmental and social issues related to the reopening of large scale and organised rutile and bauxite mining activities in the country, with a view to avoiding or minimising the problems of the past destruction of tropical rainforests. CEH and EFA intend to continue the partnership with both universities particularly as the Njala campus is only 20 kilometres from the mines and proposed project area and will provide a scientific research and technical operations base at the field level. Both departments will provide technical supervision of the land rehabilitation work. They will also play a significant role in facilitating the broad range of community training programmes including composting, collection and nursery of wildings, site preparation, transplanting of seedlings and maintenance of established plantations.

Centre for Ecology and Hydrology (CEH) co-ordinated the pre-project and this proposal. CEH are a consultant in the IUCN NL project. They will be responsible for teaching and capacity building in three of the four main key tasks identified in this proposal. CEH will be responsible for sending reports in a timely manner to the Darwin Secretariat. CEH has announced a new business plan; the Science Director of Sustainable Economies believes the proposed collaboration is unlikely to be affected by this development and has agreed to commit to the project and provide matching staff time of all CEH staff.

Community Advocacy and Development Movement (CADEM) were approached following their pivotal mediation role between the community and the mining company in the IUCN NL project. Trusted mediators will be critical in developing the new business strategy proposed.

Conservation International was approached by EFA following the recommendations of the first stage review panel and will advise the payment for ecosystem services component of this project. Specifically, the Conservation Economics Support Program within Conservation International will be conducting the analysis of various models for payment for ecosystem services. CI has extensive experience in the economic valuation of ecosystem services.

Sierra Rutile Limited (SRL) has been actively involved in the IUCN NL project as non-funded collaborators. They have pledged support for this project and have been actively involved in writing this proposal. SRL will receive no financial payment from this project; rather they are a substantial contributor.

Sierra Leone partners including the local communities in the mining area, a local group

(CADEM) and university students are responsible for environmental awareness raising, data collection, experimentation and nurseries.

Enclosed with this proposal is documented evidence of support for this project from each of the above organisations. Individual staff are named in this proposal where appropriate, with the blessing of their superiors. Withdrawal of these key personnel would not, however, jeopardise the outcome of this project because other staff members within the organisation have been identified as deputies.

9. What other consultation or co-operation will take place or has taken place already with other stakeholders such as local communities? Please include details of any contact with the government not already provided.

Mr Tommy Garnett (EFA), Dr Karim (FBC), Mr Feika representing Dr Blyden (NUC) and Dr Jan Dick (CEH) recently conducted a series of stakeholder consultations in connection with the IUCN NL funded project 'Socially and Environmentally Responsible Rutile and Bauxite Mining in Sierra Leone'. The aim of that project was to facilitate the creation of the criteria list for SEE 360 analysis. During the consultation process over 100 people were canvassed including village chiefs, women leaders and youth leaders in 6 villages. During these village meetings Jan Dick specifically asked the leaders their opinion on the decentralised business model to supply compost (primarily a female task) and planting stock (primarily a male task) to SRL reclamation efforts. All villages expressed positive interest with some suggesting appropriate business strategies.

In addition during this exercise Tommy Garnett and Jan Dick visited Dr Chris Squire, the newly appointed Executive Commissioner of the National Commission for Environment and Forestry (NaCEF). The Sierra Leone government is currently combining the Department of Environment and Forestry into one commission. Mr Femi Kamara, Assistant Director for the Ministry of Mineral Resources attended the stakeholders' workshop and was supportive of the collaboration between CEH, EFA and SRL.

PROJECT DETAILS

10. Is this a new initiative or a development of existing work (funded through any source)? Are you aware of any other individuals/organisations carrying out similar work, or of any completed or existing Darwin Initiative projects relevant to your work? If so, please give details explaining similarities and differences and showing how results of your work will be additional to any similar work and what attempts have/will be made to co-operate with and learn lessons from such work for mutual benefits.

This project leads directly from the pre-proposal project *Selection, propagation, multiplication and distribution of indigenous tree species*. The kernel of the idea was identified by the project Habitat Audit and Change Detection (162/11/006) which provided the first quantitative estimates of forest loss at a local (case study) scale and nationally. It is also timely within Sierra Leone as local NGOs and the University have recently formed the Environmental Forum for Action (ENFORAC) to coordinate actions and provide a working space for collaboration on priority issues. ENFORAC brings together significant national expertise into one easily accessible body which expedites collaboration between the UK and the host country.

In 2004, the project *Pioneering an innovative conservation approach in Sierra Leone's Gola Forest*, a collaboration between Royal Society Protection of Birds, Conservation Society of Sierra Leone (CSSL) and Forestry Department was funded. That project is focused on conservation of the Gola forest. The Gola project is concerned with assessing the biodiversity resource and developing a management plan for the forest analogous to what would be produced for a national park. The environmental threats to the Gola forest are significantly different to those in the Rutile mining areas as the Gola lies along the border with Liberia where large scale clear felling started under the Taylor regime.

11. How will the project assist the host country in its implementation of the Convention on Biological Diversity? Please make reference to the relevant article(s) of the CBD thematic

programmes and/or cross-cutting themes (see Annex C for list and worked example) and rank the relevance of the project to these by indicating percentages. Is any liaison proposed with the CBD national focal point in the host country? Further information about the CBD can be found on the Darwin website or CBD website.

By providing methods and working towards implementation of practical reclamation and conservation schemes for mining enterprises that contribute towards the sustainable livelihoods of local communities, the project will support the Sierra Leone Government's implementation of Articles:

5 (10%): through facilitation of stakeholder consensus building regarding suitable approaches,

6 (10%): through provision of broadly applicable approaches to conservation,

8 (30%): through conservation specifically within the case study areas,

11 (10%): through development of incentives from mining enterprises to enable local communities to conserve remaining core areas,

13 (5%): through increased awareness of biodiversity and ecosystem functions,

14 (10%): through minimising adverse impacts of mining activities,

18 (10%): through enabling scientific and technical co-operation between CEH, EFA, local communities, local universities and the mining company and

21 (15%): through exploration of ecosystem payments as a financial mechanism to enable conservation within a sustainable livelihood context.

12. How does this project meet a clearly identifiable biodiversity need or priority defined by the host country? Please indicate how this work will fit in with National Biodiversity Strategies or Environmental Action Plans, if applicable.

Development is of paramount importance to Sierra Leone. The country is grappling with how to sustainably use its immense wealth of natural resources to provide opportunities for its people while avoiding irreparable damage to its economic, cultural and environmental base. All environmental and biodiversity plans and policies acknowledge the inherent link between these two competing interests.

The overall goal of the National Biodiversity Strategy Action Plan (NBSAP) is to seek conservation measures that provide the solid framework for the sustainable exploitation of Sierra Leone's biodiversity for the benefit of present and future generations. This project is directly in line with the strategy.

Additionally, the overall Natural Resource Management Policy of the Government of Sierra Leone has two pillars: to promote the rational and sustainable use of natural resources thereby protecting them from further damage; and to rehabilitate those areas of the country that are now affected by severe vegetation degradation and soil erosion.

The work proposed in this project contributes to the objectives of the NBSAP including: conserving and protecting indigenous fauna and flora in order to preserve biodiversity; contributing towards providing employment and income-generating opportunities for the rural population; and restoring the degraded areas of existing reserves to productive forestry by the most cost effective means.

The NBSAP encourages an integrated approach to the use of land in Sierra Leone. Thus, through testing various schemes for local, rural-led restoration and conservation and emphasising appropriate payment and income generation models, this project directly contributes to the implementation of the plan.

13. If relevant, please explain how the work will contribute to sustainable livelihoods in the host country.

In the past, some mining enterprises worldwide exploited local communities and left them worse off in terms of resources and finances. This project aims to develop partnership options between mining enterprises and local people that deliver increased benefits, enabling them to improve the sustainability of their livelihoods. In this case study area, the

mining company used land that had been owned by the local community and also implemented some village relocations. The former activity apparently left people vulnerable and poorer. The need for natural resources and income has led to increased pressure on the remaining land. Currently some rent is paid but this is insufficient to meet local needs and there are issues regarding equity of distribution. This project will thus explore methods to improve livelihoods as well as maintain biodiversity within the remaining areas. These will include testing decentralised initiatives (the outsourcing to local people of planting stock and making compost), development of cheap, effective monitoring methods suitable for ecosystem payment models and exploration of forms of ecosystem payment that are acceptable to mining company, local communities and other stakeholders.

14. What will be the impact of the work, and how will this be achieved? Please include details of how the results of the project will be disseminated and put into effect to achieve this impact.

This project seeks to pilot methods for practical reclamation, conservation and sustainable livelihood options around mining areas in developing countries. These methods will include the decentralisation of business initiatives and exploration of forms of implementation of ecosystem payments. The Conservation Economics Support Program within Conservation International will lead the analysis on various models of ecosystem service payments including an assessment of how the decentralised business initiatives used to achieve successful reclamation and conservation around the mining area can be incorporated into the payment models. CI will work with the social, environmental and economic data collected throughout the project, and consider additional components of the land value unaccounted for under the current land rental arrangement. The analysis will also identify the strengths, weakness, threats and opportunities associated with each proposed model. The results of this case study will thus provide lessons learnt for similar mining operations in Sierra Leone and its neighbouring countries rich in mineral resources and biodiversity as well as other regions worldwide. The results will be disseminated through in country workshops, peer reviewed journal articles, scientific conferences, reports and popular articles. Within the case study area, there will be lasting impacts through the facilitation and participatory methods used within the project that will develop relationships and enable sharing of perspectives and formation of common goals between different stakeholders. There will also be increased awareness of biodiversity and ecosystem services, particularly in relation to their values, through the debate on ecosystem payments and the need for conservation.

15. How will the work leave a lasting legacy in the host country or region?

The project will deliver options that can reconcile economic development, biodiversity conservation and the sustainable livelihoods of local communities that can be used in other contexts within the host country and beyond. Sierra Leone and its neighbouring countries in West Africa are rich in natural resources and biodiversity, but this wealth is often turned against the people and the land through unsustainable and harmful resource extraction. By researching and testing frameworks to shift this paradigm and create opportunities for both large-scale and local benefits, this project will give Sierra Leone the skills it needs to conserve its heritage and promote development. In particular, different forms of implementing ecosystem payments will be provided. Within the case study area, the project will have developed particular options for practical reclamation through the establishment of nurseries in at least three villages, production systems to make and distribute compost, demonstration plots for reclamation and re-establishment of above and below ground functional ecology. The project will also provide stakeholder agreed options for the mining company to provide local communities with more effective and novel methods of compensation. Successful implementation of these options will give the mining company flagship status and potentially enable them to expand operations in a manner that promotes sustainable development. A further legacy will be the improved relationships developed between stakeholders that will enable them to develop future partnership options and resolve disputes more effectively in the future. Sierra Leone holds some of the largest

reserves of titanium ore in the world and as this is a “strategic” metal with many uses, it is likely that mining will continue for several decades requiring a constant programme of reclamation, restoration and conservation. Sierra Leone holds significant quantities of other minerals (iron, bauxite, gold and diamonds) all of which require reclamation following exploitation.

16. Please give details of a clear exit strategy and state what steps have been taken to identify and address potential problems in achieving impact and legacy.

This project does not create a new agency that is dependent on Darwin funding but rather works through existing local organisations and forums. The decentralisation business initiatives that are achieved during the project will be established from the outset between the mining company and the local community; hence exit of the project team will not mean a change of roles and disintegration of business. The demonstration reclamation plots will be wholly owned, maintained and monitored by the company as an integrated part of their rehabilitation strategy. Exchange of expertise with local NGOs and university staff will ensure that sufficient capacity for continued facilitation and technical support remains in the area. An international partner, CI, will retain its longstanding presence in the region and can thus offer further support.

17. How will the project be advertised as a Darwin project and in what ways will the Darwin name and logo be used?

The Darwin project will be fully acknowledged and the logo displayed at workshops and training sessions. Darwin funding will also be acknowledged in articles, reports and other publications resulting from the project. The local press will be informed of the project and coverage encouraged (there have already been two articles on the IUCN project mentioned in section 9). Project details and the Darwin logo will be displayed on EFA’s web site, and links made to the relevant web pages of CEH and CI. Subject to stakeholder agreement on the design and desirability of signs at the SRL - funded and -owned demonstration plots and the village composting and nursery facilities, the Darwin logo and project title will be displayed.

18. Will the project include training and development? Please indicate who the trainees will be and criteria for selection and that the level and content of training will be. How many will be involved, and from which countries? How will you measure the effectiveness of the training and will those trained then be able to train others? Where appropriate give the length and dates (if known) of any training course. How will trainee outcomes be monitored after the end of the training?

The approach to training will be participatory, learning by doing and on site, with different approaches to technical issues being discussed between external partners and local partners, suggested solutions jointly developed and long term testing undertaken using collaborative monitoring. The use of lecture style workshops will be avoided, although external and local experts will be invited to give presentations at practical demonstration workshops and a structured approach to development options will be agreed amongst partners. The mining company and local community will be provided with alternative models for local outsourcing of activities (plant stock production and composting) and options chosen using participatory workshops in at least three villages. The number of people participating will be determined by initial discussions between the mining company and local community but it is envisaged that a total of 100 local community members will be involved. The efficacy of different technical approaches will be tested over a two-year period, providing further opportunity to transfer skills regarding adaptation of solutions to local conditions. Exchange of expertise with local university personnel will lead to the provision of effective local technical options that can be used to a) train local community members in planting stock production and methods for composting and b) train local staff and students (two senior staff and 10 students) within academic institutions to monitor

reclamation plots using the techniques developed within the project. The capacities of many local stakeholders will be enhanced through the consensus building workshops, which will enable them to develop future partnerships.

LOGICAL FRAMEWORK

19. Please enter the details of your project onto the matrix using the note at Annex B of the Guidance Note. This should not have substantially changed from the Logical Framework submitted with your Stage 1 application. Please highlight any changes.

The lay out of our Logical framework has changed in order to make the components of the project clearer following the recommendations of the Darwin Advisory Committee

Project summary	Measurable Indicators	Means of verification	Important Assumptions
Goal: 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 <ul style="list-style-type: none"> • the conservation of biological diversity, • the sustainable use of its components, and • the fair and equitable sharing of benefits arising out of the utilisation of genetic resources 			
Purpose 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	Identification of successful technologies for the re-vegetation of mining spoils. 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.	Mining company adopts successful technologies Survey of local people	Mining company seriously committed to reclaiming mining soils Local people seriously committed to delivering service to mining company
Outputs Model for decentralised business initiatives (planting stock production and composting) developed Demonstration reclamation plots established using different setup methods	Model adopted by local people and mining company following this project Plots established – minimum 15 plots 0.25 ha each in each of three years	Survey of local people Photographs in reports and ground- truthing by project team	Both parties honest and transparent in their business dealings Local people deliver plants and compost of required quality and quantity in a timely manner

<p>Best local purpose method for establishing demonstration plots determined through testing</p> <p>Cheap, effective method for monitoring ecosystem payments established</p> <p>Most appropriate form of ecosystem payment for local case study determined</p> <p>Relationships between stakeholders improved and partnerships built for future interactions</p>	<p>Analysis of methods tested</p> <p>Report of method tested and suitability for purpose assessed</p> <p>Survey mining company and local community. Consolidate data and compare to similar initiatives.</p> <p>Initial and final stakeholder analyses</p>	<p>Reports and published articles</p> <p>Report to Darwin and published article</p> <p>Report to Darwin and published article</p> <p>Report to Darwin</p>	<p>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</p> <p>Remote sensing images available</p> <p>Both mining company and local community embrace the idea of ecosystem payments</p> <p>Both mining company personnel and local people open and transparent in their willingness to interact.</p>
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Activities	Activity milestones (summary of project implementation timetable)	Assumptions
<p><u>1. Reclamation technologies</u></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><u>2. Monitoring of area subject to ecosystem payment</u></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><u>3. Assess potential forms of ecosystem payments</u></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><u>4. Facilitate consensus building</u></p> <p>4.1 Workshop</p> <p>4.2 Monitoring of stakeholder relationships through consensus building</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>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)</p> <p>4.2 Monitor stakeholder relationships through stakeholder analyses and interviews. (Dec 2006, Nov 2007 and Nov 2008)</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> <p>Project team willing to accept consensus building approach</p> <p>Stakeholder honestly engage in monitoring exercises</p>

20. Provide a project implementation timetable that shows the key milestones in project activities.

Project implementation timetable		
Date	Financial year	Key milestones
Nov 2006	Apr-Mar 2006/7	Workshop with project facilitators and team members to develop appropriate facilitation methods to reduce conflict and build relationships throughout all project activities. Presentation of all project components to implementing team at the mining site to ensure everyone is fully integrated with all aspects of the project.
Nov 2006		Technical workshops conducted using participatory methods on (i) nursery and composting techniques, (ii) ecosystem monitoring (iii) ecosystem payments, with local communities and relevant mining staff.
Nov 2006		Individual stakeholder meetings to assess goals and project expectations and conduct preliminary stakeholder analysis to assess relationships. Joint stakeholder meeting to agree on common goals and procedures throughout project.
Jan 2007		Business agreements signed between plant and compost producers and SRL (at village or individual level depending on business strategy agreed).
Jan 2007		Report on the results of the analysis of ecosystem service payment models and SWOT analysis complete and submitted to SRL and community representatives.
June 2007	Apr-Mar 2007/8	Demonstration plots established by SRL
Nov 2007		Monitoring of demonstration plots reported and, following discussion of results with all stakeholders, strategy to be adopted in the second year agreed.
Dec 2007		Workshop to present results of first year activities for all project components to all stakeholders and invited guests
Dec 2007		Further joint stakeholder meeting to assess progress against initial goals and refine future annual workplan. Individual stakeholder interviews.
Jan 2008		Refined business agreements signed between plant and compost producers and SRL as appropriate.
June 2008	Apr-Mar 2008/9	Second set of demonstration plots established
Nov 2008		Monitoring of demonstration plots reported and, following discussion of results, strategy to be adopted in the Third year agreed – project team should take minor role as process should be well established if it is to continue after the project finishes.
Dec 2008		Workshop of stake holders and invited guests
Dec 2008		Monitoring stakeholder relationships through analysis and interviews
June 2009	Apr-Mar 2009/2010	Third set of demonstration plots established
July 2009		Joint stakeholder meeting to discuss results of

		business plans and reclamation and determine future interactions. Brief stakeholder analysis conducted. Individual stakeholder interviews.
Aug 2009		All demonstration plots assessed and final results of reclamation studied reported
Aug 2009		Peer reviewed article produced on project activities
Sep 2009		Two workshop of stake holders and invited guests to present final results of project at mining site in Freetown
Oct 2009		Final report to Darwin Secretariat

21. Set out the project's measurable outputs using the separate list of output measures.

PROJECT OUTPUTS		
Year/Month	Standard output number	Description (include numbers of people involved, publications produced, days/weeks etc.)
By Dec 2006	14 A	3 workshop, Initial and one for each project component
By April 2007	4A	1, reclamation & composting technologies
	4B	4 weeks
	4A	3, Njala, mapping, RS, GIS & GPS
	4B	2 weeks
	4C	3, field based, monitoring and assessment of field plots and ecosystem service areas.
	4D	2 weeks
	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").
	8	8 weeks (from 3 UK staff)
	15A	1
	18A	1
19A	1	
By August 2007	22	Minimum 15 plots at 0.25ha each
By April 2008	4A	1, data analysis and writing papers
	4B	9 weeks
	4A	3, Njala, mapping, RS, GIS & GPS
	4B	2 weeks
	4C	3, field base, monitoring and assessment of field plots and ecosystem service areas.
	4D	2 weeks
	8	7 weeks (from 3 UK staff)
	22	15 more replicated plots at 0.25ha each
By August 2008	4A	3, Njala, mapping, RS, GIS & GPS
	4B	2 weeks
	4C	3, field base, monitoring and assessment of field plots and ecosystem service areas
	4D	2 weeks
	8	8 weeks (from 3 UK staff)
By April 2009	4A	3, Njala, mapping, RS, GIS & GPS
	4B	2 weeks
	4C	3, field base, monitoring and assessment of field plots and ecosystem service areas
	4D	2 weeks
	8	8 weeks (from 3 UK staff)

Before project end	22	Additional 15 final replicated plots at 0.25ha each
	7	4 “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”.
	11B	2+ “Reclamation following rutile mining in a wet tropical environment”, “Lessons learnt in developing cost effective methods to monitor land subject to ecosystem payments”
	14A	2 Final dissemination workshop, 1 in Freetown, 1 in Mokanji
	14B	4+ Ecological conference “Restoration of rutile spoil in a wet tropical environment”, Ecological conference “Practical methods for monitoring for ecosystem services payments”, Environmental/development conference, “alternative ‘business models’ in land reclamation; experience from Sierra Leone”, GIS/RS conference “Technical issues in low-cost appropriate monitoring of tropical vegetation”.
	15A	1
	18A	1
	19A	1
	19B	1
	23	£239,119

PROJECT BASED MONITORING AND EVALUATION

22. Describe, referring to the Indicators in the Logical Framework, how the progress of the project will be monitored and evaluated, including towards delivery of its outputs and in terms of achieving its overall purpose. This should be during the lifetime of the project and at its conclusion. Please include information on how host country partners will be included in the monitoring and evaluation.

Internal CEH project management regulations will be followed, ensuring biannual assessment of progress and outputs. Annual and biannual reports to Darwin Initiative will compare planned and actual dates of completion of milestones and clarify why any aspect was delayed or expanded. All partners will be held accountable for their agreed project responsibilities. Practically, monitoring will be maintained by frequent visits, email, telephone and video conferences between partners. This communication strategy will be led by the project leader but individual aspects will be delegated to component leaders, thus ensuring that host country partners also participate in an effective monitoring strategy. Project evaluation will be conducted by assessing actual against planned outputs and through discussions at final stakeholder workshops in Sierra Leone.