



Submit by 21 January 2005

DARWIN INITIATIVE APPLICATION FOR GRANT ROUND 13 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 Nick Brown	Address: Department of Plant Sciences, University of Oxford, South Parks Road Oxford OX1 3RB
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2. Project title (not exceeding 10 words)

A biodiversity monitoring system for Trinidad and Tobago
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3. Project dates, duration and total Darwin Initiative Grant requested

Proposed start date: July 2005		Duration of project: 3 years			
Darwin funding requested	Total	2005/06	2006/07	2007/08	2008/09
	£264,500	£82,185	£80,551	£79,285	£22,479

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

<p>To build and maintain capacity in Trinidad and Tobago to monitor habitats, detect changes in plant populations and measure the effects of management.</p> <p>We propose to carry out a national vegetation inventory so that we can 1) assess the conservation status of habitats and key species 2) expand and enhance the National Herbarium 3) produce two user-friendly field guides 4) train staff in collections and information management in the herbarium 5) provide training in plant survey and identification for students at two HE institutions, staff in the state forestry service and local nature reserve guides.</p>

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	Brown		Baksh-Comeau
Forename (s)	Nick		Yasmin
Post held	University Lecturer		Curator
Institution	University of Oxford		National Herbarium of Trinidad and Tobago
Department	Plant Sciences		

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

The Darwin Initiative has funded 15 projects at Oxford University. Nick Brown was awarded funding in 1997 for "Rattan Diversity and Sustainable Management in Lao PDR" (Project 6046).

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 overseas partners that will be involved in the project and explain their roles and responsibilities. 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.

University of the West Indies proposed collaboration with Oxford on this project and hosted our pre-project planning workshop. University has agreed to invest over £12K in an upgrade of herbarium infrastructure if this project is successful. **National Herbarium:** Principal host-country partner. Curator is a co-author of this proposal. Capacity to be enhanced via upgraded facilities, new collections and additional staff. Staff will provide plant identifications for national vegetation survey and will collaborate in the teaching of plant identification. **Department of Life Sciences** Lecturer Dr Mike Oatham is a co-author of this proposal. He will supervise field survey work and collaborate with Oxford in analysis of survey data and preparation of GIS. Will collaborate in the teaching of vegetation survey methods. Will co-author field guide to the trees of T&T. **Forestry Division, Ministry of Public Utilities and the Environment:** Conservator and Deputy participated in pre-project planning meeting. Have signed research MoU with UWI in preparation for this project. Six staff members will receive training in plant survey and identification. Two junior staff members will participate in the enumeration of 45 sample plots. Deputy Conservator to collaborate on analysis of 25 yrs of permanent sample plot data.

Asa Wright Nature Centre: (<http://www.asawright.org/> Nature reserve, ecotourism and education centre) Conservation Manager participated in pre-project planning meeting and preparation of this proposal. Will collaborate on development of GIS and will co-author field guide to reserve areas for schools and ecotourists. Research collaboration approved by Board.

Environmental Management Authority (EMA): Chairman and Biodiversity Technical Co-ordinator have given advice and support during the development of this proposal. Proposal approved at a meeting of Biodiversity Advisory Council. Dr Robyn Cross will advise project managers on how to maximise policy impact of research and relevance to NBSAP objectives.

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.

Our proposal seeks to address priority actions identified in the NBSAP. These priority actions were identified by EMA in consultation with stakeholder groups in 12 workshops, 13 public consultations and a national consultation.

During our pre-project visit we held a 2-day planning workshop with UWI, Forestry Division and Asa Wright staff. We met Dr John Agard, Chairman of Environmental Management Authority, Antony Ramnerine, Conservator of Forests, Professor Narinesingh, Dean of the Faculty of Science and Agriculture UWI, and Dr Robyn Cross, Biodiversity Technical Co-ordinator, Environmental Management Authority, to ensure that our proposals matched their needs and supported rather than imposed on their initiatives. We made a joint presentation (with UWI staff) to the Biodiversity Advisory Council of Trinidad and Tobago at their meeting on 17th June and received feedback and support for our proposals.

We made a field visit, to permanent sample plots in the Victoria-Mayaro Reserve with the Deputy Conservator of Forests to discuss sampling strategies and field logistics. We made a field visit to Asa Wright Nature Centre with Conservation Manager Howard Nelson to discuss their needs for user friendly field guides. We visited the Eastern Caribbean Institute for Agriculture and Forestry to discuss with the Director, Mr Carlton Sunbury, their needs for new teaching materials and a course in plant identification.

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 will build on initiatives already underway in T&T. UWI are seeking support to establish a new Biodiversity Research Centre as a focus for expertise in the southern Caribbean. The National Herbarium will be a key component in this development.
- Our UWI counterparts have just signed a contract with the EMA to carry out a baseline biodiversity survey of the new Matura Environmentally Sensitive Area. We have agreed a standard survey methodology so that the results from this survey may be incorporated into our national inventory. We will use experiences from the Matura survey to refine our sampling and field logistics. We are currently comparing the efficiency of Modified Whittaker Plots with a 2.5 cm versus 5.0 cm dbh cut-off for the largest plot size.
- Our survey will incorporate permanent sample plots established in natural forest and plantations by the Forestry Division in 1981 and will benefit substantially from this long-term data set.
- BRAHMS (<http://herbaria.plants.ox.ac.uk/bol/brahms>) has been installed in 39 countries and millions of herbarium records are now available online. Combined with innovative imaging tools, user-friendly field-guides have been produced for Granada and West Africa.

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.

This project will assist the Government of Trinidad and Tobago to implement the CBD by mapping and monitoring the distribution of species and habitats to highlight those under particular threat (Article 7 -25%) and to facilitate the identification of areas for conservation/restoration (Article 8 – 25%) and those where development would have an adverse impact on diversity (Article 14 – 15%). It will promote sustainable use of natural forest (Article 10 – 10%) exchange of information (Article 17 – 10%) and research and training (Article 12 – 15%).

The Environmental Management Authority (EMA) is T&T's National Focal Point for the Convention on Biological Diversity. Dr Robyn Cross, Biodiversity Technical Co-ordinator, EMA has agreed to act as an adviser to the project. We have been asked to report to the National Biodiversity Advisory Council.

12. How does the work 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.

EMA and Forestry Division have identified the following priority strategies and actions in the T&T National Biodiversity Strategy and Action Plan as targets for this project. NBSAP actions are given in bold with details of how we propose to meet them below:

1. **Conduct a detailed inventory of the resource including the status and distribution of species:** We will carry out a detailed inventory of the vegetation of T&T, and prepare a map showing the distribution of species and habitats.
2. **Research threats to biodiversity and monitor environmental changes affecting biodiversity:** Our survey will enable an estimate to be made of habitat loss since the last vegetation map in 1984. It will establish a baseline for monitoring future change in habitat distribution and composition. For forest reserves where long-term permanent sample data already exist we will assess the effects of harvesting and silvicultural interventions.
3. **Broaden access to and provide opportunities for sharing information:** We propose to expand the National Herbarium by lodging 10K new voucher specimens and installing a Botanical Research and Herbarium Management System that will make a searchable botanical database freely available via the web and network the T&T collection with others in the Caribbean and worldwide. We will use this system to produce two user-friendly field guides for schools, public education and tertiary level training.
4. **Promote biodiversity and environmental education at the tertiary level:** We plan to develop and teach an accredited course in plant survey and identification at UWI and Eastern Caribbean Institute for Agriculture and Forestry (ECIAF)

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

The Forestry Division of T&T carries out natural forest management, at an operation scale, over most (75K ha) national forest land. There is significant concern that Periodic Block System currently in use is leading to the degradation of natural forest.

A network of 170 one hectare permanent sample plots (PSPs) was set-up in 1981 in natural forest reserves, by the Forestry Division. Over 100 of these plots have been re-enumerated on at least four occasions and some six times. The data have not yet been collated or analyzed. The plots are located in a range of forest types, including worked forests, and have not been treated differently to the surrounding forest so they accurately reflect the habitat conditions. Dr Brown will collaborate with Mr S. Ramnarine, Deputy Conservator of Forestry Division to analyze the changes in natural forest over this 24 year period and to develop simulations of the effect of different management regimes on forest structure and composition in future, using the forest modelling tool SYMFOR.

Plant identification is a crucial skill for natural forest management yet the number of staff capable of identifying more than the most common timber tree species is dwindling fast. There are currently only two tree spotters, both close to retirement in the Forestry Division. Six junior Forestry Division staff will take our course in plant survey and identification and will participate in the national vegetation survey in order to re-establish this skills base.

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.

Impact will be achieved by providing direct support to NBSAP priority actions. The central role of EMA in this project will ensure that our results are immediately available for use in national programmes and policies. This project will have impact in three key areas:

1. **Conservation:** The EMA is actively engaged in identifying Environmentally Sensitive Areas and developing management plans for these. This project will provide direct support to that process by highlighting key habitats and species which are under particular threat and identifying priority areas for conservation/restoration. The Ministry of the Environment is developing a community based reforestation project, which aims to plant 13K ha over the next 10 years. This project would help make sure that this reforestation reinforces conservation initiatives by providing information on the landscape scale distribution patterns. We will produce the first comprehensive land-use/vegetation map of T&T since 1984 and the first detailed inventory of plants other than major timber trees. Both the maps and our BRAHMS species database will be freely available via the National Herbarium website. All relevant government departments, NGO and CBOs will receive information on how to access these resources..
2. **Capacity building:** At the end of this project T&T will have a significantly enhanced capacity to identify, and monitor plant species and to assess the likely impacts of development on species and habitats. At least 30 biology and forestry students and 6 Forestry Division staff will have been trained in plant survey and identification. The majority of plants will be represented by vouchers in the National Herbarium and these collections will be freely accessible on-line for research and management. We will create new teaching resources for UWI and ECIAF and make these available on-line. Our new field guide to the Trees of T&T will replace a widely used but old and very incomplete tree flora. We will give copies to all trainees and to the following institutions: UWI Library; Life Sciences Library; ECIAF Library; National library, Forestry Division (20 copies each) Ministry of Education (for distribution to secondary school libraries - 100 copies), 11 major ENGOS, (20 copies), Royal Botanic Gardens (10 copies), National Reforestation and Watershed Rehabilitation Program (5 copies), EMA (5 copies).
3. **Sustainable use:** Working with a senior manager in the Forestry Division we will review the sustainability of the current silvicultural system and model the consequences of changes. The results of this work will be published in an international peer-reviewed forestry journal and will inform on-going revision of forest management systems to secure the regeneration of key tree species and increase sustainability.

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

1. Our projects will leave authoritative baseline data against which future changes to plant populations and habitats can be assessed and from which the environmental impacts of development can be predicted. The Darwin Biodiversity monitoring system will provide a framework for future monitoring. The MoU between UWI and Forestry Division has made provision for future plot monitoring.
2. The National Herbarium will be significantly upgraded, expanded (>10K new accessions) and internationally networked, resulting in an enhanced capacity to identify and monitor plant species for research and management. We will archive on BRAHMS over 15,000 valuable pre-1900 herbarium collections from the Caribbean (including T&T) held by Oxford University, not previously accessible from T&T. All type specimens will be digitized at high resolution and available on-line. The BRAHMS database will expedite and facilitate the completion of a new, modern Flora of T&T.
3. We will train a large group of young field botanists and will develop teaching materials that will allow local staff to pass on acquired knowledge and skills to future generations.

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.

- Our proposal has provided impetus to plans by UWI to invest in the development of a new regional Biodiversity Research Centre. The University plans to maintain, develop and transfer its expertise to others in T&T and beyond (see letter of support). This project is the first step in that development. As this project draws to an end we intend to work with the National Herbarium to secure funding for a complete Flora of T&T using the BRAHMS database.
- The close collaboration of all four project partners, and in particular EMA, in the development of this proposal has given a strong sense of local ownership – an important benefit of pre-project funding. We believe that this has strengthened the motivation of our host country partners and will enhance project impact and legacy.
- Our project will start with the signing of a MoU that explicitly details the contributions and responsibilities of each partner over the duration of this project. We have taken this step to ensure that all partners have realistic expectations and are fully aware of their commitments from the start.

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

The project will be known as “The Darwin Biodiversity Monitoring Project” and the Darwin logo will be used on our field vehicle, herbarium labels, website, training certificates and field guides. Darwin funding will be acknowledged in all published articles.

UWI and Forestry Division propose a high profile ceremony to mark the signing of the project MoU to which national media will be invited.

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?

This project has two training components:

1) Train herbarium staff in collections information management. Dr. Harris will provide on-the-job training and technical support in developing the BRAHMS database for the Herbarium Curator and Curatorial Assistant. After training, the Curator will be able to teach junior herbarium staff how to digitize species and collection data. She will also train tertiary level students in using the system for botanical research. The training will take place over two weeks in Yr1. Future system upgrades and support will be provided free of charge, but we have made provision for priority technical support from the software developers throughout the lifetime of this project.

2) Train students, forestry staff and nature guides in field survey and plant identification. Drs Harris, Brown, Oatham and Mrs Baksh-Comeau will develop and deliver a course to 3rd Year Life Sciences students at UWI, 2nd Year Forestry Diploma students at ECIAF and junior staff at Forestry Division and Asa Wright. We aim to train a minimum of 30 students, 6 Forestry staff and 4 Asa Wright guides over three years. The course will involve lectures, practical classes and field work, participating in the national vegetation survey. We plan to make most teaching materials available on-line in a Virtual Learning Environment as reference material for those who have completed the course. Students will be taught how to use the BRAHMS database and given a copy of our field guide to trees. The course will be optional but accredited and will be assessed through existing examinations systems. In addition, participants who successfully complete the course will be given a Darwin badged certificate highlighting the skills they have learned, in order to enhance their employability. We will collect feedback from the students on their experiences of the course.

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.**

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 build and maintain capacity in Trinidad and Tobago to monitor habitats, detect changes in plant populations and measure the effects of management.	Baseline information on the flora, its distribution and recent patterns of change made publicly available. Expanded National Herbarium and enhanced taxonomic skills base. New information used by policy makers, educators, managers and ENGOS	Project data and reports available via National Herbarium website. Increase in the number of personnel within the Forestry Division, and ENGOS with taxonomic skills EMA, Forestry Division and ENGO reports and publications	Partner organisations remain committed to project.
Outputs			
Network of permanent sample plots enumerated	Ten 0.25 ha sample plots enumerated per habitat type.	Project data and reports available via National Herbarium website.	No unforeseen disruption to field surveys. Trained staff able to participate in survey work.
Updated vegetation map of T&T. Assessment of changes in habitat structure, composition and distribution since 1984.	Map and habitat descriptions published. Analysis of changes published in peer reviewed journal.	Map and descriptions available via National Herbarium website. Copies of published papers sent to Darwin Secretariat.	Effective research collaboration with Forestry Division and Centre for Caribbean Land and Environmental Appraisal Research.
Taxonomy training courses provided for tertiary level students.	At least 30 students from UWI and ECIAF take new course in taxonomy and participate in field surveys by Yr3	Course materials published on-line. Student attendance and assessment records and certification.	>30 students opt to take new course.
Taxonomy training courses provided for junior Forestry Division staff and Asa Wright guides.	At least 6 Forestry Division staff members and 4 Asa Wright guides take new course and participate in field surveys by Yr3	Course materials published on-line. Student attendance and assessment records.	Staff available to take new course.
Expansion of National Herbarium and collections catalogued on herbarium database (BRAHMS).	10,000 new accessions to National Herbarium and 90% of old and new accessions recorded on herbarium database by Yr3	Database accessible via National Herbarium website	New herbarium storage facilities in place.
Field guide to the trees of T&T and Asa Wright Nature Centre published.	Field guides peer reviewed and publication dates established.	Copies of reviewer comments sent to Darwin Secretariat. Two copies of both guides sent when published.	N/A
Activities		Activity Milestones (Summary of Project Implementation Timetable)	
Field surveys	Sampling methodology agreed and tested (Aug 05). At least thirty 0.25ha sample plots enumerated per year. All voucher specimens pressed, dried, mounted and catalogued (March 08).		
Vegetation mapping	Recent remotely sensed images of T&T obtained (Sept 05). Cloud-free mosaic produced (Nov 05). Unsupervised classification and stratified random sampling design produced (Dec 05). Ordination of field survey data completed (Dec 07). Supervised classification and updated vegetation map produced (March 08).		

Taxonomy training	New course materials and timetable prepared (Jan 06). First cohort of ECIAF and UWI students enrolled (March 06). Course taught and students participate in National Vegetation Survey (May 06,07 and 08).
Herbarium upgrade	BRAHMS database installed and working (Sept 05). Existing accessions added to database (June 07). Pre-1900 Oxford accession added to database (June 07). National Vegetation Survey voucher specimens added to database (March 08).
Analysis and publications	Project website on-line (March 07). Draft user-friendly guide to Asa Wright Nature Centre produced (June 07). Draft field guide to trees of T&T produced (March 08). Analysis of habitat change completed and manuscript prepared for publication (June 08).

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

Project implementation timetable		
Date	Financial year	Key milestones
Apr-Mar 2005/6		
May 05		Post-doctoral research positions advertised
June 05		Post-doctoral researchers interviewed and appointed
June 05		Curatorial assistant appointed
July 05		Project MoU signed in Trinidad at launch ceremony.
July 05		Harris visits T&T to install BRAHMS software in National Herbarium and train Curator and Curatorial assistant.
July 05		Brown visits T&T to instigate field survey work and begin analysis of permanent sample plot data.
August 05		Field vehicle and equipment purchased.
September 05		UK post-doc starts GIS and remote sensing work at Centre for Caribbean Land and Environmental Appraisal Research.
December 05		Unsupervised classification of remotely sensed images completed. Network of stratified random sampling plots defined.
January 06		New course materials and timetable prepared. Virtual Learning Environment available on-line.
March 06		At least 30 sample plots enumerated
Apr-Mar 2006/7		
July 06		Brown and Harris visit T&T to teach course in plant survey and identification.
September 06		15,000 Pre-1900 Oxford Herbarium specimens from T&T archived on BRAHMS. Type specimens digitized.
September 06		Project website on-line with direct access to BRAHMS databases.
March 07		At least 60 sample plots enumerated in total.
March 07		90% of existing accession to National Herbarium archived on BRAHMS.
Apr-Mar 2007/8		
March 08		At least 10,000 voucher specimens from vegetation survey identified, dried, mounted and labelled.
June 07		Final draft of guide to plants of Asa Wright Nature Centre completed and sent for publication.
September 07		At least 70 sample plots enumerated in total.
December 07		Ordination of field survey data completed.
March 08		Brown and Harris visit T&T to teach course in plant survey and identification.
March 08		Final workshop to review progress and present results.
March 08		Supervised classification of vegetation types completed. Updated vegetation map of T&T published on National Herbarium website.
March 08		All new accessions to National Herbarium archived on BRAHMS.
March 08		Final draft of guide to trees of T&T completed and sent for publication.
Apr-Mar 2008/9		
June 08		Analysis of changes in structure and composition of production forest since 1981 completed and manuscripts submitted for publication.
June 08		Modifications to silvicultural system modelled and manuscript submitted for publication.
June 08		Analysis of habitat change since 1984 completed and manuscript submitted for publication.

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.)
08/03	4A	At least 30 undergraduates to receive training in plant survey and identification.
08/03	4B	6 weeks (2 week course, each year for 3 years)
08/03	6A	At least 6 junior Forestry Division staff and 4 Asa Wright Nature Centre guides to receive training in plant survey and identification.
08/03	6B	6 weeks (2 week course, each year for 3 years)
08/06	8	82 weeks (Brown 9 weeks, Harris 9 weeks, UK Postdoc 64 weeks).
08/06	10	2 field guides (<i>Trees of Trinidad and Tobago</i> and a user-friendly guide to <i>Plants of Asa Wright Nature Centre</i>)
1. 08/03 2. 06/09 3. 06/09	12A	3 databases: 1. On-line GIS database of vegetation types in T&T including species and habitat distribution maps. 2. BRAHMS database of National Herbarium of Trinidad and Tobago 3. BRAHMS database of Pre-1900 Trinidad Collections held by Oxford University.
08/06	12B	1 database of Forestry Division permanent sample plot data (1981-present) collated, corrected and analyzed.
08/03	13B	The National Herbarium will be significantly upgraded (air conditioned and new storage cabinets), expanded (>10K new accessions) and internationally networked.
04/07 and 08/03	15A	2 Press releases: one to mark the signing of the project MoU, the second to announce rates of habitat loss since 1984.
04/04	15C	One press release by Oxford University to announce project funding and project objectives.
08/06	20	£13, 636. (4WD vehicle (used), plant collecting equipment, survey equipment, Garmin GPS72, SLR digital camera, desktop computer and printer, Software)
07/09	22	At least 75 new Modified Whittaker Plots established, enumerated, marked and georeferenced.
08/06	23	TOTAL: £107,844. Oxford University (£69,403 – salaries), UWI (£33,741 – salaries, herbarium cabinets, workshop), Asa Wright Nature Centre (£4,700 – publication costs, satellite telephone).

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.

Our Trinidad post-doctoral researcher will report directly to Mike Oatham on day-to-day progress with the vegetation survey. The UK post-doctoral researcher will report to Nick Brown. Whilst in Trinidad, s/he will work in collaboration with Centre for Caribbean Land and Environmental Appraisal Research and will report to the Director, Professor Serwan Baban, who has agreed to oversee this work (see letters of support). The herbarium assistant will be supervised by Yasmin Baksh-Comeau. We will evaluate how much students taking have learned from our course in plant survey and identification through the UWI examinations system. We will ask students, Forestry Division staff and Asa Wright guides to rate whether our course helped them learn new skills effectively using a standard course experience questionnaire. The project team will meet with its EMA adviser twice each year and will report annually to the National Biodiversity Advisory Committee. The project will conclude with a final workshop at UWI in which achievements will be reviewed, research findings presented and further work planned.