

Darwin Initiative for the Survival of Species

Final Report

1. Darwin Project Information

Project Reference No.	162/13/023
Project title	Tropical Forest Canopy Training Programme for ASEAN Region
Country	ASEAN Region, Centred in Sabah, Malaysia
UK Contractor	Global Canopy Programme
Partner Organisation (s)	Universiti Malaysia Sabah, Royal Society SEARRP
Darwin Grant Value	£107,553
Start/End date	1 st October 2004 – 30 th March 2007
Project website	www.globalcanopy.org/training
Author(s), date	John Pike, June 2007

2. Project Background/Rationale

The purpose of the project was to build human capacity in Malaysia and other biodiversity rich nations in the ASEAN region for investigating forest canopy biodiversity, its conservation, function, value and policy context.

The significance of forest canopies for biodiversity conservation is still poorly understood. Many threatened species (e.g. orangutans, hornbills) are almost impossible to study from the ground and very little is known of the structure and importance of invertebrate communities in the canopy. Ozanne et al 2003 (Science 301:183-186) states that ‘..forest canopies are among the most species-rich yet most highly threatened terrestrial habitats’, ‘..they support about 40 % of extant species of which 10% are predicted to be canopy specialists’ and ‘..the forest canopy is the functional interface between 90% of Earth’s terrestrial biomass and the atmosphere’.

Human capacity for canopy investigation is extremely limited in biodiversity rich countries. To overcome the structural complexity and the height of the canopy, specialized training is required in access methods and experimental design. This project aimed to build local capacity in canopy research and conservation training so that researchers, forest managers and conservationists in Malaysia and the ASEAN region could, in future, be trained locally to meet these challenges. The lack of human capacity and access to specialist training had been highlighted by the local project partners and other, allied agencies through the previous work of the GCP within Malaysia. The project was jointly developed in direct response to this need with wide consultation and support from institutions around the region.

3. Project Summary

This project aimed to construct the human capacity and structure for a self-sustaining canopy access and science training school for the ASEAN region, centred in Sabah, Malaysia. Instructors would be trained over the course of the three-year project who could continue to teach students from institutions all around the region and become a centre of excellence for canopy science in SE Asia.

The outputs of the project were:

- Forest canopy research and conservation field course developed and established at University of Malaysia Sabah.
- Human capacity for training in canopy research and conservation developed.
- Canopy training manual for the field course produced **and translated into Malay.**
- New leaders in canopy science and conservation trained.
- Agreement of relevant national and regional institutions on a strategy for canopy training in the region

A full original logframe can be found in appendix 5. The logframe has not been modified during the course of the project.

The original objective or operational plan of the project has not been modified during the course of the project. Only the dates of the course activities have been modified due to the delay to the start of the project caused by late notice of the allocation of funds.

By generating much needed capacity in forest canopy research and monitoring, the project supported the Malaysian Government's commitments to the CBD by helping it to implement Articles 6 (5%), 7 (10%), 12 (30%) and 18 (5%) with particular emphasis on the thematic programme on Forest Biodiversity (25%) as well as the cross-cutting issue on Biodiversity and Climate change (20%). In addition, the course will specifically support the CBD's 2002 Expanded Programme of Work on Forest Biological Diversity that calls for research 'To understand critical thresholds of forest biodiversity loss and change paying particular attention to endemic and threatened species and habitats including forest canopies'. (Prog element 4, Goal 3, Obj. 1b).

The project has been broadly successful in meeting its objectives as outlined in the project logframe. A successful field course has been established in Borneo, a strong team of scientists and access instructors trained to deliver the course and a new module developed and formalised on the UMS MSc curriculum. 3 field courses have been run in Borneo and representatives from 14 different institutions in 7 ASEAN region countries have been trained to work in the canopy. In addition to the named outputs, Danum Valley field centre (DVFC) has become an international centre for canopy science, attracting researchers from around the world to study the canopy, in large part due to its newly acquired access facilities and specialist canopy staff trained on this project. One of the graduate students from Sabah trained on this project has also taken up a PhD position at the University of Cambridge, UK due specifically to her canopy access skills gained on this course.

4. Scientific, Training, and Technical Assessment

Training Activities

Over the three years of this project we have trained a total of 59 students, researchers and forest conservation workers in canopy access and science. Each training course has included in-depth canopy access and canopy science training courses as detailed in previous reports. Assessments have been necessarily rigorous, but despite this, only 2 participants have actually failed the assessment for the course.

Selection of participants: The selection of participants was the responsibility of the local collaborators against criteria jointly agreed between UMS, GCP and CAL. One of the main difficulties encountered in the project was the selection of appropriate trainee climbing instructors. In retrospect it is a flaw in the project design for us to have expected that all of the climbing trainee trainers selected in the first year would have the ability, aptitude, attention to detail and concern for safety that is required to become a canopy access instructor. It is very hard to know whether someone is a suitable candidate for such a role before they have been through an initial canopy climbing course. Given that the local coordinators had no previous experience of canopy climbing or science, we are fortunate that, of the 8 candidates that were selected, 4 of them were suitable for a future role as a canopy access instructor. A more detailed discussion of the training outputs of the course can be found in section 6 below.

Three courses have been run during the project:

Course 1: January – February 2005

Course 2: November- December 2005

Course 3: January 2007

5. Project Impacts

The project has created a canopy training school for the ASEAN region and formalised an MSc module in canopy science on the curriculum of UMS (discussed elsewhere in this report). The project has therefore achieved its stated project purpose.

There have been two major unexpected impacts of the project's achievements, namely the way in which Danum Valley Field Station has become an international hub for canopy science and the PhD position in Cambridge University taken up by Kalsum Mohd Yusah, one of the newly trained canopy science and access trainers from UMS.

The training and capacity building elements of the project have greatly improved the ability of scientists in Malaysia and the wider ASEAN region to study the poorly known biodiversity of the forest canopy. Many of the researchers/students who have been trained on the course are hoping to establish canopy science programmes or projects at their institutions with one notable case being in the Philippines, where a new canopy training school is planned as a direct result of the attendance of Grace Villamor on the first two courses. Canopy Science now occupies a much higher position in the region with a large amount of interest having been generated by the project.

6. Project Outputs

6.1 Summary of progress in activities against project outputs

Output 1: 'Forest Canopy Research and Conservation field course established at University of Malaysia, Sabah'

This output has been almost fully completed and many achievements, both scheduled and unscheduled, have been made. One of the main achievements of this project is that a fully functioning canopy MSc level course is now formalised on the curriculum of UMS which can be accessed by both local and ASEAN region students. To the best of our knowledge this is the first such course to have been formally accredited anywhere in the world and represents a significant achievement of the project. A team of well-trained science and climbing instructors, as well as fully developed course manuals in English and Bahasa Malay, are now in place to ensure that the course can be effectively run in the future.

6.2 Progress towards Project Outputs

Output 1 (Building human capacity in Malaysia to study forest canopy biodiversity, its conservation, function, value and policy context), Output 2 (Forest canopy research and conservation field course established at University of Malaysia, Sabah), and Output 4 (New leaders in canopy science and conservation trained)

Summary of achievements for each group of trainers and trainees

6.2.1 Local canopy climbing trainee instructors

In total 5 climbing instructors have managed to complete the full three years of training and are potentially now able to train others. However, as explained in the 2007 annual report, the initial recruitment of trainee instructors in year one was flawed in principle and has led to problems in commitment, ability and aptitude all the way through the project. In addition, during the last course of the project, a number of problems occurred and only 3 trainee instructors were eventually able to complete the training due to an outbreak of chicken pox. These 3 trainee climbing instructors underwent one week of rope access training, recapping advanced skills such as re-belay rescues, tensioned high line rigging and complex rescue scenarios. They were taught a number of extra techniques necessary to enhance their competence in teaching and were given the opportunity to refresh all of the old skills learned over the last two years. During the following three weeks each trainee instructor took complete responsibility for the training of 10-12 new BCAP students under the direct supervision of CAL staff. At the end of each course the students and instructors were assessed for competence.

In October and November 2006, the GCP funded two of the trainee climbing trainers from this project to attend an international canopy science experiment in Australia. Kalsum Mohd Yusah and Daniel Pamin, both from UMS, spent 2 weeks carrying out canopy fieldwork with canopy biodiversity specialists from around the world during IBISCA Queensland, a pioneering experiment investigating the potential impact of climate change on the rainforest canopy. Daniel and Kalsum were joined in Australia by John Pike, the GCP Training Manager, who provided 2-days of project specific training in Australian rainforest aimed at expanding Kalsum and Daniel's climbing skills, providing them with experience of a new forest type and preparing them for the upcoming course in January.

6.2.2 Likelihood of meeting the goals and outputs of the project in this area

1) It is the opinion of the climbing specialists who have run this project, that, despite best efforts to create opportunities, not enough experience in climbing has been gained by the trainee climbing instructors in between courses and that consequently they **do not yet have enough experience to run access courses on their own.**

2) The difficulties involved in recruiting suitably fit, enthusiastic, calm and appropriate trainee access instructors at the start of the project were underestimated meaning that the numbers actually trained were lower than anticipated. In addition, it is now clear that research assistants (whose job it is to carry out and support field research and are based in a field centre with access to continued practice and experience) make much better climbing instructors than researchers because they are able to fully engage in the process, gain regular experience between courses, and are not so encumbered by weighty academic and administrative loads.

3) The outbreak of chicken pox at Danum Valley during this final year of training removed two trainee instructors from the course. This has effectively cut the trained team from 5 to 3, which we consider to be too small a number to effectively run an annual course.

Impact and solutions to these issues

The project has not yet met its outputs in providing a team of canopy access trainers who are capable of independently training novices in canopy access techniques to BCAP standard. CAL staff will give extra training during 2007 to the Danum Valley research assistants who were unable to participate in the course this year. **The GCP is also seeking small-scale funding to send CAL training staff to supervise the first independent field course in 2007.**

6.2.3 Malaysian canopy science trainers

Nine of the Malaysian science trainers who were initially trained in year one returned to the course in 2007 to provide teaching inputs. In addition, all of the previous year's trainers have provided inputs to the manual and have been kept involved in the progress of the course through updates and the workshop in Kota Kinabalu during September. In 2007, two-weeks of science training were led by Dr Henry Bernard from UMS with teaching inputs from Dr Zulman, Dr Susan Benedick and Nasir Abd Majid, Dr Kueh Boon Hee, Dr Francis Peters, Dr Alona Linatoc, Dr Idris Said and Dr Homathevi Rahman. Small research training projects were planned by students under the supervision of these staff. All trainers have committed themselves to providing further inputs to the course in future years.

Over the last three years a large number of researchers and lecturers from UMS have participated in both the science and access components of this programme, with many also gaining their BCAP qualification. The course has greatly benefited from the teaching inputs provided by these returning staff over the last two years. Through the supervision of Prof. Kitching and Dr Morison and the exposure to canopy science brought by the course, a well-trained team of canopy science trainers has been created. These trainers have gained a lot of experience from the course, having an especially acute understanding of the feasibility and difficulties of working in the canopy gained through practical experience. The commitment of the science trainers has been repeatedly demonstrated and we believe this output to be met.

6.2.4 Canopy science trainees

19 students from UMS, Peninsular Malaysia and Indonesia were trained to BCAP level on the course in 2007. In total, over the three years of the course, 59 students have been trained in addition to the trainee science instructors. The project has achieved all outputs in this area.

6.2.5 Other implicit outputs within project purpose

Field Course established on curriculum of UMS (Output 21)

Following the development of a canopy module during meetings in January 2005 and revisions at the Kota Kinabalu workshop in September 2005, a draft canopy module was submitted in November 2006 to the UMS senate for approval. The module was ratified and passed by the university senate in September 2006 and will now be available for credit for 2007 entry onwards. This is a wonderful achievement for UMS and represents the first MSc level canopy science module available anywhere in the world. The existence of the course on the university syllabus is a crucial step to achieving a strong lasting legacy for the project. The canopy science field course now has an official university context in which to run in future years (more information available in the UMS internal evaluation report, appendix 7).

Annual Canopy Fellows Newsletter produced and disseminated (Output 16A)

The second Canopy Fellows newsletter entitled 'Branching Out' was produced during August 2006 and was emailed to all course participants and posted on the GCP website. The 2006 newsletter can be found in appendix 6. In total 2 newsletters have been produced during the project and a final edition is planned for Autumn 2007. All previous course participants receive these newsletters electronically via the GCP website, providing a useful network for keeping in touch and sharing ideas and

Yayasan Sabah, the other local partner in the project has provided Danum Valley Field Station accommodation, permits and support but has not been especially active during the lifetime of the project.

This project has also forged many new relationships between UMS and ASEAN region institutions which are likely to continue well beyond the end of project funding. We have always worked to invite as many institutions as possible to one of the courses in an effort to ensure that news of the course was spread as far as possible regionally. Each participant attending the course has returned to their institution and helped to generate further interest and excitement. The result of this policy is that future courses are likely to be over rather than under subscribed and the amount of canopy research carried out regionally, greatly increased.

9. Monitoring and Evaluation, Lesson learning

Monitoring of the project was carried out by seeking post-course feedback from students, biannual meetings between the project partners and an internal course evaluation exercise carried out by UMS (appendix 7).

Feedback from course students was taken into account in the planning of future courses, although the only criticisms were generally about factors outside the control of the project partners e.g. the weather and the accommodation at the field centre during busy periods.

The main problems during the project have been already discussed in this report and in previous reports. The only real problem encountered has been in the recruitment and training of local climbing instructors and we now accept that the initial recruitment policy was flawed. As previously discussed, steps have been taken to ensure that the three trainee instructors who have successfully completed the training can go on to teach the course independently and that further training can be given to the those who were unable to complete their training due to illness.

We have learned a great deal from the experience of running this project and have altered and enhanced plans for future capacity building exercises as a result. It is clear now that the canopy access instructors trained should be technicians and not researchers and that it is better to train a team of technicians who are attached to a field centre and not a university due to the latter groups frequent movements and commitments and their often poor access to practice in the field between courses. Plans for future projects now include funded fieldwork between courses to enhance the ability of local scientists to engage with canopy research and to ensure regular, real-world experience for the trainee instructors in between courses.

Actions taken in response to annual report reviews (if applicable)

No major questions were asked or modifications requested in annual report reviews over the lifetime of the project and all minor points raised were noted and acted upon.

10. Darwin Identity

The Darwin Initiative logo was used on all course documentation, including manuals and letters of invitation to participants. The logo is also prominently featured on all web-based material and all project partners made great efforts to ensure that the Darwin Initiative was mentioned in all press coverage. The profile of the Darwin Initiative is very high within Sabah where both UMS and the Royal Society SEARRP have been strongly involved in a number of Darwin Initiative funded projects over the last few years. A number of Darwin Initiative funded projects are also currently underway in Sabah.

This project has stood alone as a capacity building programme but it is also strongly linked to many other projects and is providing benefits across a broad-range of research. The project has been recognised as having a clear separate identity but it now seems likely that it's benefits will become part of a larger canopy research theme in Sabah.

11. Leverage

Small-scale funding was raised by the GCP to pay for trainee climbing instructors from UMS to gain canopy research experience on a major international project in Queensland, Australia. In addition, the project has strengthened the relationship between the GCP and UMS and built much needed capacity in canopy research, increasing the likelihood of a favourable decision by UNEP and the GEF of the world bank in the Whole Forest Observatory project run by the GCP, of which UMS is the Malaysian National Implementation Agency and project partner.

12. Sustainability and Legacy

The legacy of this project is the successful canopy training school and formal MSc canopy science module now being run at UMS. We believe that these are likely to endure as there is great interest in the region and the profile of the course seems to be high. Additional funds are currently being sought to send UK climbing instructors back to Sabah to oversee the first independently run course and to provide extra training for the local trainee climbing instructors who missed out on their last course due to illness.

13. Value for money

We believe that this project has provided good value for money. Canopy training is a highly specialist activity and it is consequently much more expensive to run canopy access and science training courses than similar ground-based training. The specialist equipment required also increases project costs and makes canopy training roughly equivalent to diving training courses in terms of cost. We are hoping to utilise the lessons learned from this project to build canopy training capacity in other biodiversity-rich nations around the world. From our experience in Sabah we feel that these projects will be greatly increased in quality by planning inter-course research which brings the trainee climbing instructors and scientist together to gain vital experience and to carry out real-world science. These activities will increase the budget to around £200,000.

14. Appendix I: Project Contribution to Articles under the Convention on Biological Diversity (CBD)

We have allocated the majority of the project % to article 12 although it is our belief that this project has significant impacts for Malaysia and the ASEAN region in the thematic programme on Forest Biodiversity (25%) and the cross-cutting issue on Biodiversity and Climate Change (20%)

Project Contribution to Articles under the Convention on Biological Diversity		
Article No./Title	Project %	Article Description
6. General Measures for Conservation & Sustainable Use	5	Develop national strategies that integrate conservation and sustainable use.
7. Identification and Monitoring	10	Identify and monitor components of biological diversity, particularly those requiring urgent conservation; identify processes and activities that have adverse effects; maintain and organise relevant data.
8. In-situ Conservation		Establish systems of protected areas with guidelines for selection and management; regulate biological resources, promote protection of habitats; manage areas adjacent to protected areas; restore degraded ecosystems and recovery of threatened species; control risks associated with organisms modified by biotechnology; control spread of alien species; ensure compatibility between sustainable use of resources and their conservation; protect traditional lifestyles and knowledge on biological resources.
9. Ex-situ Conservation		Adopt ex-situ measures to conserve and research components of biological diversity, preferably in country of origin; facilitate recovery of threatened species; regulate and manage collection of biological resources.
10. Sustainable Use of Components of Biological Diversity		Integrate conservation and sustainable use in national decisions; protect sustainable customary uses; support local populations to implement remedial actions; encourage co-operation between governments and the private sector.
11. Incentive Measures		Establish economically and socially sound incentives to conserve and promote sustainable use of biological diversity.
12. Research and Training	75	Establish programmes for scientific and technical education in identification, conservation and sustainable use of biodiversity components; promote research contributing to the conservation and sustainable use of biological diversity, particularly in developing countries (in accordance with SBSTTA recommendations).

13. Public Education and Awareness		Promote understanding of the importance of measures to conserve biological diversity and propagate these measures through the media; cooperate with other states and organisations in developing awareness programmes.
14. Impact Assessment and Minimizing Adverse Impacts		Introduce EIAs of appropriate projects and allow public participation; take into account environmental consequences of policies; exchange information on impacts beyond State boundaries and work to reduce hazards; promote emergency responses to hazards; examine mechanisms for re-dress of international damage.
15. Access to Genetic Resources		Whilst governments control access to their genetic resources they should also facilitate access of environmentally sound uses on mutually agreed terms; scientific research based on a country's genetic resources should ensure sharing in a fair and equitable way of results and benefits.
16. Access to and Transfer of Technology	5	Countries shall ensure access to technologies relevant to conservation and sustainable use of biodiversity under fair and most favourable terms to the source countries (subject to patents and intellectual property rights) and ensure the private sector facilitates such assess and joint development of technologies.
17. Exchange of Information		Countries shall facilitate information exchange and repatriation including technical scientific and socio-economic research, information on training and surveying programmes and local knowledge
19. Bio-safety Protocol		Countries shall take legislative, administrative or policy measures to provide for the effective participation in biotechnological research activities and to ensure all practicable measures to promote and advance priority access on a fair and equitable basis, especially where they provide the genetic resources for such research.
Total %	100%	Check % = total 100

15. Appendix II Outputs

Please quantify and briefly describe all project outputs using the coding and format of the Darwin Initiative Standard Output Measures.

Code	Total to date (reduce box)	Detail (←expand box)
Training Outputs		
1a	Number of people to submit PhD thesis	0
1b	Number of PhD qualifications obtained	0
2	Number of Masters qualifications obtained	0
3	Number of other qualifications obtained	59 (BCAP award), 15 (ACAP award)
4a	Number of undergraduate students receiving training	36
4b	Number of training weeks provided to undergraduate students	9
4c	Number of postgraduate students receiving training (not 1-3 above)	0
4d	Number of training weeks for postgraduate students	9
5	Number of people receiving other forms of long-term (>1yr) training not leading to formal qualification(i.e not categories 1-4 above)	0
6a	Number of people receiving other forms of short-term education/training (i.e not categories 1-5 above)	0
6b	Number of training weeks not leading to formal qualification	0
7	Number of types of training materials produced for use by host country(s)	2
Research Outputs		
8	Number of weeks spent by UK project staff on project work in host country(s)	12
9	Number of species/habitat management plans (or action plans) produced for Governments, public authorities or other implementing agencies in the host country (s)	0
10	Number of formal documents produced to assist work related to species identification, classification and recording.	0
11a	Number of papers published or accepted for publication in peer reviewed journals	0
11b	Number of papers published or accepted for publication elsewhere	0
12a	Number of computer-based databases established (containing species/generic information) and handed over to host country	0
12b	Number of computer-based databases enhanced (containing species/genetic information) and handed over to host country	0
13a	Number of species reference collections established and handed over to host country(s)	0
13b	Number of species reference collections enhanced and handed over to host country(s)	0

Dissemination Outputs		
14a	Number of conferences/seminars/workshops organised to present/disseminate findings from Darwin project work	1
14b	Number of conferences/seminars/ workshops attended at which findings from Darwin project work will be presented/ disseminated.	2
15a	Number of national press releases or publicity articles in host country(s)	3
15b	Number of local press releases or publicity articles in host country(s)	6
15c	Number of national press releases or publicity articles in UK	0
15d	Number of local press releases or publicity articles in UK	2
16a	Number of issues of newsletters produced in the host country(s)	0
16b	Estimated circulation of each newsletter in the host country(s)	
16c	Estimated circulation of each newsletter in the UK	1000
17a	Number of dissemination networks established	1
17b	Number of dissemination networks enhanced or extended	0
18a	Number of national TV programmes/features in host country(s)	1
18b	Number of national TV programme/features in the UK	0
18c	Number of local TV programme/features in host country	3
18d	Number of local TV programme features in the UK	0
19a	Number of national radio interviews/features in host country(s)	0
19b	Number of national radio interviews/features in the UK	0
19c	Number of local radio interviews/features in host country (s)	3
19d	Number of local radio interviews/features in the UK	0
Physical Outputs		
20	Estimated value (£s) of physical assets handed over to host country(s)	£8000
21	Number of permanent educational/training/research facilities or organisation established	1
22	Number of permanent field plots established	0
23	Value of additional resources raised for project	0

16. Appendix III: Publications

Provide full details of all publications and material that can be publicly accessed, e.g. title, name of publisher, contact details, cost. Details will be recorded on the Darwin Monitoring Website Publications Database that is currently being compiled.

Mark (*) all publications and other material that you have included with this report

Type * (e.g. journals, manual, CDs)	Detail (title, author, year)	Publishers (name, city)	Available from (e.g. contact address, website)	Cost £
<i>University Magazine</i>	<i>'Wyvern' University of Essex Magazine, January 2006</i>	<i>University of Essex, Colchester</i>	<i>http://www.essex.ac.uk/Wyvern/2006-01/</i>	<i>NA</i>
<i>*University Website</i>	UMS TOWARDS BUILDING CAPACITY TO CONDUCT SCIENTIFIC RESEARCH IN NATURE'S LAST FRONTIER - THE RAINFOREST CANOPY	<i>Universiti Malaysia, Sabah</i>	<i>http://www.ums.edu.my/</i>	<i>NA</i>
<i>*Newspaper Article</i>	<i>'Sabah hub of forest canopy research, September 23rd 2005</i>	<i>New Straits Times</i>	<i>John Pike, Global Canopy Programme</i>	<i>NA</i>
<i>*Newspaper Article</i>	<i>'Sabah a centre of canopy science, says Kah Kiat' September 23rd 2005</i>	<i>New Sabah Times</i>	<i>John Pike, Global Canopy Programme</i>	<i>NA</i>
<i>*Newspaper Article</i>	<i>'Sabah to have sole Observatory in SE Asia for studying rainforest canopies' September 23rd 2005</i>	<i>The Borneo Post</i>	<i>John Pike, Global Canopy Programme</i>	<i>NA</i>
<i>*Newspaper Article</i>	<i>'UMS creating future leaders' September 23rd 2005</i>	<i>The Borneo Post</i>	<i>John Pike, Global Canopy Programme</i>	<i>NA</i>
<i>Newspaper Article</i>	<i>'Sabah sasar jadi pusat Sains Sudur di Asean' September 23rd 2005</i>	<i>New Sabah Times (Bahasa Malay)</i>	<i>John Pike, Global Canopy Programme</i>	<i>NA</i>
<i>*Newspaper Article</i>	<i>'Exploring the unknown tree-top world' 26th September 2005</i>	<i>Daily Express</i>	<i>John Pike, Global Canopy Programme</i>	<i>NA</i>

<i>*Newspaper Article</i>	'Top-notch researchers, scientists to participate in Sabah Canopy Workshop' September 23 rd 2005	<i>Daily Express</i>	<i>John Pike, Global Canopy Programme</i>	NA
<i>* Newspaper Article</i>	'Seeking answers to key questions on forest canopy' – 7 th March 2007	<i>New Straights Times</i>	<i>John Pike, Global Canopy Programme</i>	NA
<i>* Newspaper Article</i>	'UMS takes the lead in canopy studies – 7 th March 2007	<i>New Straights Times</i>	<i>John Pike, Global Canopy Programme</i>	NA
<i>Newsletter</i>	'Catalyst – Queensland Government newsletter; Issue 20/December 2006	<i>Catalyst</i>	<i>John Pike, Global Canopy Programme</i>	NA
<i>Newsletter</i>	GCP Annual Report 2006	<i>New Training Courses</i>	<i>John Pike, Global Canopy programme</i>	NA
<i>*Newsletter</i>	Sabah Training Courses	<i>Branching Out, GCP Newsletter</i>	http://www.globalcanopy.org/training/pdf/branchingout-vol2.pdf	NA
<i>Newsletter</i>	Sabah Training Course gets off the ground in Borneo	<i>Branching Out, GCP Newsletter</i>	http://www.globalcanopy.org/training/pdf/branchingout-vol1.pdf	NA

17. Appendix IV: Darwin Contacts

To assist us with future evaluation work and feedback on your report, please provide contact details below.

Project Title	Tropical Forest Canopy Training Programme for the ASEAN region
Ref. No.	162/13/023
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Role within Darwin Project	Project Manager
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Partner 1	
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Role within Darwin Project	Local Project Co-ordinator
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Partner 2 (if relevant)	
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Organisation	ITBC, UMS
Role within Darwin Project	Local Project Management
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Fax	
Email	

Appendix 5 - Original Project Logframe

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 the benefits arising out of the utilisation of genetic resources 			
Purpose Build human capacity in Malaysia and other biodiversity rich nations in ASEAN region for investigating forest canopy biodiversity, its conservation, function, value and policy context.	A nationally recognised forest canopy research and conservation field course established in Sabah, Malaysia. Trainers trained. Potential leaders in canopy science and conservation trained.	End of project report.	Information gained from canopy research is utilised for forest conservation and/or equitable and sustainable use of canopy resources.
Outputs Forest canopy research and conservation field course developed and established at University of Malaysia Sabah.	Field course structure and content developed. Field course adopted on University curriculum.	Field course manual. Annual field course reports. University Curriculum.	Political or ideological impediments to canopy research do not prevent training courses from running.
Human capacity for training in canopy research and conservation developed.	10 local scientists and 4 climbers commit to forming a team of canopy trainers and receive training for trainers in canopy access, research methods and conservation. A minimum of 5 ecology teaching staff from outside Malaysia trained in 2005 and 2006. Minimum of 20 potential ecology trainers trained on the field course.	Training for trainers report. Letters of commitment from trainers or their institutions. Annual field course reports. BTO reports of UK experts. Post course feedback from teaching staff and trainees.	Teaching staff involved continue to teach on the annual field course.
Canopy training manual for the field course produced.	Draft manual in local language prepared, presented to workshop, approved and later finalised and printed.	Printed manual	Field courses in Malaysia continue to run and use the manual.
New leaders in canopy science and conservation trained.	Minimum of 40 people trained in Malaysia in aspects of canopy science and its broader policy and conservation context.	Field course reports. Post course feedback from students.	Some course participants take on canopy science work.
Agreement of relevant national and regional institutions on a strategy for canopy training in the region	Workshop held for representatives of key Malaysian and regional institutions. Field course structure presented at this workshop and future strategy agreed.	Workshop report.	Relevant scientists willing to collaborate in the development of training programmes.
Activities Staff training	Activity Milestones (Summary of Project Implementation Timetable) 1 week field course held for team of 4 technicians in canopy access methods that meet UK safety standards. 2 week field course held in canopy access and research for local canopy research trainers. On-the-job training for both groups in 05 and 06		
Field courses	Field courses held in 2005 and 2006 each involving a minimum of 20 students, 5 climbing professionals, 10 Malaysian trainers and 2-5 UK scientists.		
Training manual	Draft manual produced by in 2004. Ratified at workshop in 05 and tested on field course in 05. Finalised and printed by Dec 05.		
Workshops	In-country project planning workshop in Malaysia in May 2004. Regional 3-day workshop held in 2005.		