



DARWIN INITIATIVE



APPLICATION FOR GRANT FOR ROUND 12 COMPETITION: STAGE 2

Please read the Guidance Notes before completing this form. Give a full answer to each section; applications will be considered on the basis of information submitted on this form. Please do not cross-refer to information in separate documents except where invited on the form. The space provided indicates the level of detail required but you may provide additional information on a separate A4 sheet if necessary. Do not reduce the font size below 12pt or the paragraph spacing.

Submit by 19 January 2004

Ref (Defra only):

1. Name and address of organisation

Natural Environment Research Council, Centre for Ecology & Hydrology (CEH), Hill of Brathens, Banchory. AB31 4BW in association with The Tropical Biology Association (TBA), Department of Zoology, Downing Street, Cambridge CB2 3EJ

2. Project title (not exceeding 10 words)

COMBATING INVASIVE ALIEN PLANTS THREATENING THE EAST USAMBARA MOUNTAINS, TANZANIA

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

Describe briefly the aims, activities and achievements of your organisation. (Large institutions please note that this should describe your unit or department)

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

Details	Project leader	Other UK personnel (if working more than 50% of their time on project)	Main project partner or co-ordinator in host country
Surname	HULME		SAWE
Forename(s)	Philip		Corodius
Post held	Head of Ecosystem Dynamics		Conservator
Institution (if different to above)			Amani Nature Reserve
Department	Ecosystem Dynamics		Information Centre
Telephone			
Fax			
Email			

Aims To provide robust solutions to ecological problems of concern to local, national and international user communities through the mitigation of threats to biological diversity, the promotion of sustainable management of species and habitats, and the resolution of environmental conflicts.

Activities We undertake excellent science, delivered through the collation, management and analysis of long-term environmental datasets drawn across a range of spatial scales, experimental studies examining interactions within, between and among species, and continued dialogue with a diverse assemblage of stakeholders.

Achievements CEH Banchory leads several prestigious international research programmes funded by the European Union that relate to Biodiversity Assessment Tools (BioAssess), Ecological Conflicts (REDCAFE & REGHAB) and Biological Invasions (EPIDEMIE). The Centre has a reputation for "solution-orientated" science recognised internationally as excellent.

CEH Banchory led *Recovery of Serengeti Wildlife Research Institute* (162/05/043) from 01/4-06/00 whilst other CEH sites lead *Habitat audit & change detection in Sierra Leone* (162/11/006) from 01/02-03/04 & the Darwin Initiative Monitoring Programme. The TBA was funded for *Darwin Courses in Tropical Biology* (162/05/092) from 04/96-03/99.

6. Please list the overseas partners that will be involved in the project and explain their role and responsibilities in the project. The extent of their involvement at all stages in the project should be detailed, including in project development. Please provide written evidence of this partnership.

1 **Amani Nature Reserve, Tanzania (ANR).** Contact Person. Mr CT Sawe, (Conservator) ROLE: A Department of Forestry and Beekeeping Project aimed at managing the East Usambara Forests will assist in coordination of research, field workshops and provision of permits, accommodation & laboratory facilities. Will have joint responsibility (with EUCAMP & TAFORI) of implementing the Invasive Alien Plant (IAP) management strategy.

2 **East Usambara Conservation Area Management Programme, Tanzania (EUCAMP).** Contact: Shedrack Mashauri ROLE: A joint venture between the governments of Tanzania, Finland and the European Union initiated to conserve the biodiversity in the unique East Usambara Mountains. EUCAMP will supply GIS data and survey reports produced by FRONTIER TANZANIA. Will also facilitate liaison with local communities.

3 **Tanzanian Forestry Research Institute, Tanzania (TAFORI)** Contact: Mr Teonis Msangi ROLE: Regional botanical expertise, access to forestry data & herbarium and assist with identification guides.

4 **Sokoine University of Agriculture, Faculty of Forestry & Nature Conservation, Tanzania** Contact person: Prof. A.G. Mugasha ROLE: Has previous research experience on invasions in East Usambaras and will help coordinate MSc training in IAP ecology through Sokoine University of Agriculture.

7. What steps have been taken to (a) engage at all appropriate levels within the host country partner organisations to ensure full support for the project and its outcomes; and (b) ensure the benefits of the project continue despite staff changes in these organisations?

The Tropical Biology Association has been working in the East Usambaras since 1998 and has therefore developed excellent working relationships with the Tanzanian partners. These relationships have been formalised by Memoranda of Agreement, and are actively maintained at a variety of levels through the TBA courses that are run each year, and hence there is full support for the project and its outcomes regardless of staff changes. Invasive alien plant invasions have long been recognised by ANR & EUCAMP as priority issues requiring action. Further, the recent assignment of ANR as a MAB reserve ensures that IAP management remains a priority. Finally, the continuation of TBA activities during and beyond the project will ensure that the benefits of the project, and its collaborations persist.

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

The project will contribute significantly to the Global Invasive Species programme (GISP) established by the Scientific Committee On Problems of the Environment (SCOPE) to conserve biodiversity and sustain human livelihoods by minimizing the spread and impact of invasive alien species. Outputs will be delivered through the Invasive Species Specialist Group (ISSG) of the World Conservation Union (IUCN). The project has been developed in discussion with representatives from both organisations and will represent the first major IAP programme for Tanzania. Continued collaboration will ensure project outputs reach an international audience as well as appropriate Tanzanian government offices. In the East Usambaras, the project links all the major environmental organisations together and will be developed in partnership with the local communities.

PROJECT DETAILS

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

To assist Tanzania, a nation rich in biodiversity but poor in resources with the conservation of biodiversity in the East Usambaras & in the implementation of Articles 5-6, 8h (alien species), 12-14, & 16-17 of the Biodiversity Convention. To draw on leading UK expertise in the field of monitoring, assessment and management of plant invasion impacts on biodiversity to ensure scientific excellence, high quality research outputs & long-term collaborative partnerships.

To collaborate with local government, NGO & academic institutions via information dissemination, capacity building & infrastructural support so as to establish a legacy of trained expertise & sustainable strategies for IAP management. To empower Tanzanian researchers in ANR, TAFORI, EUCAMP & Sokoine University of Agriculture to map, monitor & manage invasive alien plants in the Eastern Arc Mountains so as to safeguard globally important biodiversity.

To provide a benchmark for best practice in the management of plant invasions in East Africa & establish a strong platform for leveraging additional funding to continue & expand the project e.g. Earthwatch, Leverhulme, NERC, EU.

10. Is this a new initiative or a development of existing work (funded through any source)?

This is a new initiative

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.

The project will play a pivotal role in assisting Tanzania apply the guiding principles for prevention, introduction and mitigation of IAP impacts of in the context of activities aimed at implementing article 8(h) of the Biodiversity Convention (50%). Specifically the project will: a) enable Tanzania to assess the risks posed to ecosystems, habitats and species from IAP; b) focus priority attention to the problem of invasions in the geographically and evolutionarily isolated ecosystems of the East Usambaras, research that will be submitted as a case study to the Conference of Parties of the CBD through the Global Invasive Species Programme; c) facilitate collaboration in the development of projects at national and international levels to address the issue of alien species including the exchange of best practices in support of the Global Invasive Species Programme; d) assist in the development of a national strategy and action plan to address the issue of alien species in the East Usambaras; and e) develop effective education, training and public-awareness measures concerning IAP issues. In so doing, the project will contribute to Article 10d of the CBD by supporting local populations to develop and implement remedial action where biological diversity has been reduced (20%). This will occur through establishing programmes of scientific/technical education and training in measures for the conservation of biodiversity (Article 12d, 15%) and raising public awareness (Article 13a, 15%).

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

The East Usambara forests have been likened to the African equivalent of the Galapagos Islands in terms of their endemism and biodiversity and are considered to be one of the most important forest areas in Africa. As a signatory of the Biodiversity Convention, Tanzania has a commitment "*to strictly control the introduction of non-indigenous species*" and supports the interim guidelines on invasive species agreed at COP5 & applying the precautionary principle in tandem with local communities to tackle the problem of transboundary invasion of alien species, a leading cause of biodiversity loss between regions. Addressing the considerable threat of IAP to biodiversity in the East Usambaras was identified as a national priority by both the Natural Environment Management Council and Tanzania Forestry Research Institute at the Invasive Species in Eastern Africa workshop hosted by IUCN. IAP are a serious problem in the Tanzanian Protected Areas System, key needs are to: a) raise awareness among leaders & increasing inter-sectorial cooperation, b) develop capacity to identify IAP and production of identification manuals, c) establish monitoring programmes, and d) develop management strategies. The project will be pivotal in resolving these key obstacles to IAP management in Tanzania, comply with actions agreed at COP6 & help conserve global biodiversity.

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

The spread of cosmopolitan non-native plant species in the East Usambaras detracts from the natural landscape and the subsequent loss of biodiversity results in a less attractive option for ecotourism. The IAP management plan will raise awareness of the potential worth of the natural resources and encourage their sustainable use and maintain partnerships with research institutes & the wider community. Management may alleviate pressure on forest resources if the use of IAP for firewood is encouraged. This project will enhance the local capacity for effective management of natural resources upon which the poor depend. Sound management of IAP helps increase ecosystem resilience & productivity which is critical to the security of livelihoods. Project partners have considerable experience in this area, & hence the activities have been closely targeted to the needs of local communities.

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

International Impact: The project represents the first large-scale attempt to combat IAP in Tanzania and as such will be a benchmark for further studies throughout East Africa. Key output will be the end-of-project workshop on Alien Species in East Africa where lessons learnt from the project will be disseminated to academic, government and nongovernmental organisations from throughout the region.

National Impact: The study will contribute significantly to addressing issues in the nation's thematic report to the CBD relating to Alien and Invasive Species. It will be a significant case study that can be extended to other Tanzanian ecosystems and establish a framework upon which to assess IAP risks and impacts. Key outputs will be trained staff in government organisations e.g. TAFORI and access to generic guidelines for IAP risk assessments.

Local Impact: The project will deliver tailor-made practical advice regarding management of problematic IAP in the East Usambaras. Key outputs include raised local awareness of IAP problems, trained staff in ANR and a management plan that will form the basis of long-term monitoring and control of IAP in the East Usambaras.

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

Physical legacy: The project will donate to partner organisations computers, GIS software and ecological equipment that will facilitate continuing research, survey and monitoring of IAP in the East Usambaras. **Information Legacy:** The project will generate considerable information that will play a major role in continuing project goals post-funding. This includes the Database and GIS of IAP in the East Usambaras, IAP identification guides, as well as training manuals in GIS, Ecosystem Impact Assessment and Control Methods. The detailed IAP management plan for the East Usambaras will include short medium & long-term management priorities & scenarios **Human Legacy:** The project includes a strong element of training and the individuals participating in the courses will themselves remain as a lasting legacy to the project. Over 20 Tanzanians (and through the TBA courses over 50 international students) will receive specific training in IAP related issues. The two MSc candidates will be encouraged to continue their work on IAP either through employment in Universities/NGOs or through further studies e.g. PhDs

16. What steps have been taken to identify and address potential problems in achieving impact or legacy?

The continued involvement of the TBA in the East Usambaras provides an excellent mechanism to ensure a lasting legacy for the project through the use of equipment, software, GIS, identification guides, monitoring sites etc. as part of the Tropical Biology courses. This activity will encourage local partner organisations to maintain equipment and monitoring sites as well as update guides as necessary. Opportunities for continued development of MSc students beyond the project exist through future British Ecological Society support of African students to undertake PhDs. The MAB status of ANR will ensure IAP issues continue to be prioritised and also help leverage additional research funding.

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 is distinctive in its scope to deliver novel insights into plant invasions, original approaches to management of vulnerable ecosystems, and new perspectives in local & regional policy. It represents one of the first attempts: To assess concurrently both the risks (e.g. likelihood of invasion) and hazards (scale of ecological impact) of IAP. To incorporate environmental, historical, cultural, and biogeographic data into assessments of IAP risks and hazards. To introduce a hierarchical perspective of ecosystem vulnerability by examining invasions at local and regional scales To involve wide participation from managers, local communities, academics, students and scientists The Darwin name and/or logo will feature on the project website, all reports, press releases and publications, onequipment purchased by the project, and at workshops and conferences.

18. Are you aware of any other individuals/organisations carrying out similar work? Are there completed or existing Darwin Initiative projects which are relevant to your work? Please give details, explaining the similarities and differences and how your work will be distinctive and innovative. Show how the outputs and outcomes of this work will be additional to any similar work, and what attempts have been/will be made to co-operate with such work for mutual benefits.

To our knowledge there is no project similar in scope and scale currently being undertaken in East Africa, nor relevant Darwin Initiative projects examining invasions in humid tropical forests. Preliminary studies in the East Usambaras have focused exclusively on one exotic tree species *Maesopsis eminii* but greater threats may exist from other introduced species e.g. *Psidium cattleianum*, *Cycas revoluta*, *Senna spectabilis*. Thus outputs will complement previous studies and add considerably to our knowledge of invasion in the East Usambaras. The project will link with plant invasion projects worldwide through the Global Invasive Species Programme where information will be shared with studies from other humid tropical forest invasions (e.g. Hawaii) for mutual benefit.

19. Will the project include training and development? Please indicate who the trainees will be and criteria for selection. 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 training?

Various levels of training will be provided through the project (please see milestones for dates and duration) **Tailormade Training Courses:** three ten day courses on "GIS in Biological Invasions", "Assessing Ecosystem Impacts" and Alien Plant Species Management". Ten Tanzanians (selected by partner institutions in relation to interests and suitability) trained on each course. Assessed and a certificate awarded to each successful candidate. **TBA Tropical Biology Course:** Two Tanzanians and up to 20 international students participate on the courses, three of which will coincide with the project. Students apply individually and are carefully selected in relation to their interests, experience & references. The courses comprise lectures on the East Usambaras, invasions & other topics plus related field exercises. Individual research project assessed & a certificate awarded to successful candidate. **MSc Research Projects:** Two Tanzanians will undertake MSc projects that combine taught and research elements over 24 months. The MSc will be registered at Sokoine University with fieldwork undertaken in the East Usambaras but written-up at CEH Banchory. Research projects will examine the demography and distribution (e.g. spatial distribution, size class, habitat occurrence and regeneration), ecosystem impacts (e.g. allelopathy, nutrient cycling, hydrology, biodiversity) and control options for a minimum of two IAP. MSc students will attend one TBA course and the three Tailormade Training Course. The students will also be expected to teach on two TBA courses. The TBA has an excellent alumnus network that will facilitate monitoring of trainee outcomes for the MSc students.

20. How are the benefits and/or work of the project expected to continue after the end of grant period? Please provide a clear exit strategy.

The acceptance of the East Usambaras to the UNESCO Man & Biosphere (MAB) reserve network consolidated the values of the area as a unique biodiversity hotspot. The Darwin project is consistent with MAB ideology and its outputs will be fed into the Biosphere Reserve Integrated Monitoring Programme. This will ensure the outputs continue to be used and further developed. The IAP management guidelines will be pivotal to further conservation efforts in the East Usambaras. The existence of trained, environmentally aware staff in the partner organisations will facilitate continued progress of the project objectives. The area is also a target of various interests from different international conservation efforts (e.g. TFCMP: Eastern Arc Component) and the potential to raise further funds to continue elements of the Darwin project are better than for most global biodiversity hotspots. A clear exit strategy has been built into the project in which a significant reduction in the distribution, abundance and impact of at least one IAP will not only benefit biodiversity but act as case studies to empower local NGOs to continue efforts against other IAPs. This achievement will provide tangible support for the submission of a series of recommendations on the management of IAP invasion in the East Usambaras to the Tanzanian Ministry of Tourism, Natural Resources and Environment. The success will be disseminated internationally through scientific papers in peer-reviewed journals and the proceedings of the "Alien Species in East Africa" workshop, that will mark the end of this project.

Provide a project implementation timetable that shows the key milestones in project activities. How will the most significant outputs contribute towards achieving the purpose of the project? (This should be summarised in the Log Frame as Indicators at Purpose level)

Project implementation timetable	
Date	Key milestones
2004 01. April	Project Initiated in Tanzania: Kick start meetings with Universities, TAFORI & ANR Website established: see www.ceh.ac.uk/epidemie for example project website GIS of East Usambara Forest Reserves developed Training material for "GIS in Biological Invasions" course prepared & published on website
02. June 03.	
July 04. August	
05. September	
06. September	
07. October 08.	
October 09.	
November	
2005 10. March	
11. April 12.	
August 13.	
September 14.	
September 15.	
October 16.	
October 17.	
December	
2006 18. March	
19. April 20. July	
21. August 22.	
September 23.	
September 24.	
October 25.	
October 26.	
November 27.	
December	
2007 28.	
February 29.	
March 30. March	
31. June	

The IAP management plan for the East Usambaras, based on the GIS, ecosystem impact and control studies, will provide a proven framework for undertaking conservation and restoration activities to combat the negative impacts of IAP on biodiversity. The availability of staff trained in invasion ecology will ensure partner organisations have sufficient institutional capacity to undertake management recommendations over both the short- and long-term and will represent a living legacy of the Darwin project. The project website, peer reviewed scientific papers and the "Alien Species in East Africa" workshop will place the research on the international stage, facilitate regional programmes on combating IAP, contribute to global biological invasion programmes established by SCOPE and IUCN and satisfy Tanzania's obligations under the Biodiversity Convention.

23. Set out the project's measurable outputs using the attached list of output measures

PROJECT OUTPUTS		
Year/Month (starting April)	Standard Output Number (see standard output list)	Description (include numbers of people involved, publications produced, days/weeks etc)
2004/May	8 7 15A 15C 10 10 14B	Three week visit to Tanzania by 2 UK project staff Website providing guidance on problems of invasive plants International press release through IUCN Aliens Newsletter UK Press release through NERC Press Office 'Exotic Plant Species in East Usambaras' identification guide Mapping/Monitoring in Biological Invasions' workbook and guide Poster presented at BES Annual Meeting (Manchester) Two Tanzanians trained on TBA Tropical Ecology course Four weeks training for two Tanzanians on TBA course Ten Tanzanians trained in "Mapping in Biological Invasions" course One weeks training for ten Tanzanians in Mapping/Monitoring Three week visit to Tanzania by 2 UK project staff Three week visit to Tanzania by 2 UK project staff 'NIS Impact Assessment' workbook and guide Paper presented at BES Annual Meeting Two Tanzanians trained on TBA Tropical Ecology course Four weeks training for two Tanzanians on TBA course Ten Tanzanians trained in "NIS Impact Assessment" course One weeks training for ten Tanzanians in Impact Assessment Three week visit to Tanzania by 2 UK project staff Two papers submitted to peer reviewed journals Three week visit to Tanzania by 2 UK project staff 'Invasive Plant Management' workbook and guide Paper presented at BES annual Meeting Two Tanzanians trained on TBA Tropical Ecology course Four weeks training for two Tanzanians on TBA course Two Tanzanians attain MScs Ten Tanzanians trained in "Invasive Plant Management" course One weeks training for ten Tanzanians in NIS Management Three week visit to Tanzania by 2 UK project staff Two papers submitted to peer reviewed journals East Usambara NIS Management Plan published Three week visit to Tanzania by 2 UK project staff GIS incorporating NIS distributions & abundance data International Press release through IUCN Aliens newsletter Aliens in East Africa Workshop organised £6300 of physical assets handed over- scientific equipment & software Fifty permanent plots established and monitored post project £44,191 raised from from other sources
2004/June	4C 4D 4C 4D 8 8 7 14B	
2004/July	4C 4D 4C 4D 8 11B 8 7	
2004/July	14B 4C 4D 2 6A 6B 8	
2004/August	11B 9 8 12A 15A 14B 20	
2004/August	22 23	
2004/Sept		
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MONITORING AND EVALUATION

24. Describe how the progress of the project, including towards delivery of outputs, will be monitored and evaluated in terms of achieving its overall purpose. This should be both during the lifetime of the project and at its conclusion. Please make reference to the indicators described in the Logistical Framework.

Regular meetings of the project steering committee (consisting of members drawn from ANR, TAFORI and Sokoine University as well as CEH and TBA) will be held in Tanzania (twice yearly) to review progress (including all field work reports), resolve problems, and agree the strategy for the coming months. Opportunities for raising additional funds for the project will be addressed by the partner institutions at each meeting. Progress reports will be submitted to the Amani Nature Reserve Management Board who will independently evaluate project progress. Training will be assessed and the standards monitored. The MSc students will have a structured programme of work with clear goals, milestones and expected outputs. The quality of the MSc research will be improved by ensuring that analysis and writing are undertaken in the UK. At other times contact will be maintained through monthly reports submitted by the MSc students and more frequently through electronic mail. The MSc students will produce an interim report after 12 months. The UK specialists will arrange the dissemination of reports, and, encourage publication of papers in peer reviewed journals. Regular contact with the Darwin Initiative will be maintained through both six-month and annual reports. The final workshop on "Alien Species in East Africa" will provide a platform for appraising project progress in relation to the current state-of-the-art.

25. How will host country partners be involved in monitoring and evaluation of the project?

Host country partners (ANR, TAFORI & Sokoine University) will be involved in the project steering committee that will meet a minimum of twice yearly. They will be kept informed of all project developments and will contribute to discussions on progress. Staff at Sokoine University will co-supervise the MSc projects. Progress reports will also be delivered to the Amani Nature Reserve Management Committee and to the Ministry of Tourism, Natural Resources and Environment. Information will be disseminated to a wider audience in the host country through the website and specifically to academic institutions, government departments and NGOs in the "Alien Species in East Africa" workshop.

26. How will you ensure that the project achieves value for money?

The UK specialists will ensure that all fieldwork relates directly to one or other of the project objectives, and will keep and audit the project accounts, which will be submitted annually to the Darwin Initiative. Equipment will be sourced from a range of suppliers to ensure the most economic and reliable options are purchased, international travel will similarly make use of the most economic and practicable routes. Educational discounts will be exploited wherever possible. Budgets will be based on actual costs rather than standard *per diem* rates. In these ways value for money will be ensured.

27. Reporting Requirements. All projects must submit six monthly reports (by 31 October each year) and annual reports (by 30 April each year). Please check the box for all reports that you will be submitting, dependent on the term of your project. You must ensure that you cover the full term of your project.

Report type	Period covered	Due date	REQUIRED?
Six month report Annual report Six month report Annual report Six month report Annual report Six month report	1 April 2004 – 30 September 2004 1 April 2004 – 31 March 2005 1 April 2005 – 30 September 2005 1 April 2005 – 31 March 2006 1 April 2006 – 30 September 2006 1 April 2006 – 31 March 2007 1 April 2007 – 30 September 2007	31 October 2004 30 April 2005 31 October 2005 30 April 2006 31 October 2006 30 April 2007 31 October 2007	Yes Yes Yes Yes Yes Yes No
Final report	1 April 2004 – project end date	3 months after project completion	Yes

LOGICAL FRAMEWORK

28. 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
<p>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 <input type="checkbox"/> the conservation of biological diversity, <input type="checkbox"/> the sustainable use of its components, and <input type="checkbox"/> the fair and equitable sharing of the benefits arising out of the utilisation of genetic resources</p>			
<p>Purpose To empower researchers in the Tanzanian Forestry Research Institute, East Usambara Conservation Management Programme, Amani Nature Reserve and Sokoine University to map, monitor & manage invasive plants in East Usambaras so as to safeguard globally important biodiversity and satisfy Tanzania's CBD obligations</p>	<p>Distribution maps of IAP species abundance in the main forest areas of the East Usambaras used to direct IAP control programme. Invasion scenarios for priority problem species developed. Evidence of invasive plant species eradication and/or control.</p>	<p>IAP identification guides in use Invasion scenarios for priority IAP species tested. Management strategies put in practice in the field Results published in peer reviewed journals and on website</p>	<p>Researchers integrate new knowledge into future management of IAP in East Usambara forests Project resource at least match scale of IAP problem in order to assess scope for control. Partners attract additional support to continue control strategies following project completion.</p>

<p>Outputs Four partner institutions able to monitor and manage the long term eradication of IAP in the East Usambaras IAP identification guides produced IAP management strategy in place Publications</p>	<p>A minimum of 30 staff from 4 partner institutions & 2 MScs trained in invasion ecology and IAP management Guidelines published, 100+ copies produced/distributed as hardcopies and on web Strategy developed in collaboration with UK and Tanzanian staff 2+ newspaper articles, 4+ journal papers, workshop proceedings published</p>	<p>IAP distribution database Participant attendance and assessment records 2 copies sent to Darwin Initiative IAP management strategy endorsed by local NGOs and published Copies of all publications sent to Darwin Initiative</p>	<p>A high % of participants complete training, pass assessments and continue present employment. Publisher and distribution method identified Cooperation among partner organisations & availability of resources Sufficient media interest & quality of research outputs</p>
<p>Activities Workshops Field Research Programme Manual Development Publicity Material</p>	<p>Activity Milestones (Summary of Project Implementation Timetable) Yr1: Start-up workshop with project team to establish priorities, methodologies and procedures for data collation and to develop the tailor-made training programmes (April 04); "Mapping/Monitoring in Biological Invasions" training workshop (10 days Oct 04); Yr 2: "Ecosystem Impacts" training workshop (10 days Oct 05); Yr 3: "Alien Species Management" training workshop (10 days Oct 06); Invasive Species in East Africa workshop (1wk Mar 07) proceedings of which produced 6wks afterwards Collate details of IAP plantation, existing vegetation survey data and EUCAMP GIS database (Sept 04); Protocols for field surveys and target species produced and agreed (Oct 04). Field surveys, mapping and demography studies completed (June 05); Ecosystem Impact Studies completed (June 06); Control studies completed (Feb 07) Collation of information on surveys, impact studies and control trials. Draft management manual produced (Dec 06). Publication (Mar 07) Newspaper and radio coverage (yrs 1-3), project information in local NGO publications (various dates), IAP identification guides published (yr 2); 2 scientific publications drafted (in each of yrs 2& 3), workshop proceedings published (May 06)</p>		