



Submit by 13 January 2006

**DARWIN INITIATIVE APPLICATION FOR GRANT ROUND 14 COMPETITION:STAGE 2**

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

**1. Name and address of organisation**

<b>Name:</b> Dr Richard A PETTIFOR	<b>Address:</b> Institute of Zoology, Zoological Society of London, Regent's Park, London NW1 4RY
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**2. Project title (not exceeding 10 words)**

<b>Integrating Crane Conservation with Sustainable Habitat Utilisation</b>
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**3. Project dates, duration and total Darwin Initiative Grant requested**

<b>Proposed start date: 1 July 2006</b>		<b>Duration of project: 3 years</b>		<b>End date: 31 June 2009</b>	
<b>Darwin funding requested</b>	<b>Total</b>	<b>2006/07</b>	<b>2007/08</b>	<b>2008/09</b>	<b>2009/2010</b>
	£ 239,577	£ 95,393	£ 75,187	£ 55,329	£ 13,667

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

The primary objectives of this project are to ensure the continued survival of South Africa's three crane species, two listed as critically endangered and one as vulnerable, and enable the sustainable conservation of their associated habitats. We will 1) develop and train a team of South African researchers capable of providing objective scientific advice on conservation of cranes, the management of their habitats, and associated endemics, and include other African range states in this capacity development; 2) involve custodians of crane habitat, both large scale farmers and disadvantaged people, in conservation through extensive community based educational schemes; 3) leave a self-sustaining, lasting legacy including a continuing programme of data collection and analytic tools that will feed directly into the 2009 crane forward strategy. These will be achieved through a) a framework for ongoing data collection using a common model that identifies future data requirements, reporting & management needs; b) collection of new data relevant to crane conservation and habitat management; c) training in data collection and analysis, especially spatial; d) development of & training in crane-specific, spatial population models; e) development of & training in relevant educational and community awareness material; f) production of integrative forward strategy and sustainable business plan; g) production of PHVA models, crane sensitivity maps and risk assessments; h) in addition, our results will be integrated with national biodiversity and conservation planning currently being undertaken by the South African National Biodiversity Institute, particularly as it relates to the CBD.

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

<b>Details</b>	<b>Project Leader</b>	<b>Other UK personnel (working more than 50% of their time on project)</b>	<b>Main project partner or co-ordinator in host country</b>
<b>Surname</b>	PETTIFOR		THERON
<b>Forename (s)</b>	Richard Anthony		Leon-Jacques
<b>Post held</b>	Senior Research Fellow		Manager

Institution	Institute of Zoology		South African Crane Working Group
Department	Zoological Society of London		Endangered Wildlife Trust

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

IOZ has received 10 DI funded proposals to date, including, more recently, the following: "Building capacity for conservation of a critically endangered flagship species" (R Amin & R Pettifor, 16/10/004); "Conserving the critically endangered Darwin fox on Chiloe Island, Chile" (S Funk, 162/11/013); "A national plan for carnivore conservation in Tanzania" (S Durant, 162/11/007); "Building capacity and determining disease threats to endemic Galapagos fauna" (A Cunningham, 162/12/017); "Addressing a threat to Caribbean amphibians: capacity building in Dominica" (A Cunningham 162/13/032); "Building capacity for the recovery of critically endangered *Gyps* spp. vultures in India" (A Cunningham, EIDPO 5); "Developing a National Conservation Action Plan for the mammals of Tanzania" (S Durant, 14-055).

**7. IF YOU ANSWERED NO TO QUESTION 6 describe briefly the aims, activities and achievements of your organisation. (Large institutions please note that this should describe your unit or department)**

Aims (50 words)

Activities (50 words)

Achievements (50 words)

**8. Please list the UK (where there are partners in addition to the applicant organisation) and host country partners that will be involved in their project and explain their roles and responsibilities in the project. Describe the extent of their involvement at all stages, including project development. What steps have been taken to ensure the benefits of the project will continue despite any staff changes in these organisations? Please provide written evidence of partnerships.**

This project was first discussed with Kevin McCann, then manager of the South African Crane Working Group (SACWG) in 2004. E-mail correspondence and a meeting with Leon Theron (current manager of SACWG) took place in early 2005, and a successful Darwin Pre-proposal Funding application was made. Site visits were undertaken and a week-long workshop with 18 participants was held in July 2005. Using the SACWG 2004 Five-year Forward Strategy as a starting point, a set of priorities for this DI proposal was drawn up & subscribed to by all participants. Both the Stage 1 and current Stage 2 proposal have been sent to all partners, who have agreed to its objectives and methods. Key partners include 1) the South African Crane Working Group, Endangered Wildlife Trust [EWT SACWG] (L Theron, SA Lead Partner); 2) Conservation Leadership Group, Endangered Wildlife Trust [EWT CLG] (A van Zyl, Manager); 3) KwaZulu-Natal [KZN] Biodiversity Programme (K McCann, Manager); 4) KZN Crane Foundation (K McCann, Committee member); 5) Overberg Crane Group [OCG] (V Hudson, Co-ordinator); 6) CapeNature (K Shaw, Ornithologist); 7) Avian Demography Unit [ADU], University of Cape Town (D Young, Project Co-ordinator, Co-ordinated Avifaunal Roadcounts (CAR)); 8) Northern Cape Dept of Tourism, Environment & Conservation (M Anderson, Ornithologist); 9) South African National Biodiversity Institute (SANBI; T Smith); 10) Working for Wetlands (WfW), SANBI (J Dini, Manager); 11) CSIR-Environmentek, Council for Scientific and Industrial Research (B Reyers); 12) Ezemvelo KwaZulu-Natal Wildlife (I Rushworth, ecologist); 13) Mpumalanga Parks Board (A Linstrom, Wetland Ecologist); & 14) the International Crane Foundation/EWT partnership (K Morrison, Manager). Leon Theron (SACWG) will lead the work in South Africa, managing the five existing fieldworkers and one fund-raiser/financial assistant, plus the GIS technician & 2 fieldworkers to be employed under this DI proposal. He will also be responsible for cleaning and entering the existing geo-referenced crane data. Vicki Hudson will continue to make her Overberg crane data available to us, whilst Donella Young (ADU, University of Cape Town) will make the relevant Co-ordinated Avifaunal Roadcount (CAR) data available to us. Belinda Reyers (CSIR) will provide us with the latest Landsat data layers, whilst we will co-ordinate with Tammy Smith (SANBI) on obtaining the relevant GIS data layers from SANBI's National Grassland Biodiversity Programme and National Spatial Biodiversity Assessment. John Dini (Working for Wetlands -

WfW) will provide geo-referenced data of South African wetlands and make funding available for SACWG to ground-truth these data. Co-operation between us will ensure that key crane sites are included in the WfW rehabilitation schemes. Andre van Zyl, manager of EWT's Conservation Leadership Group, works closely with SACWG and will ensure the smooth integration between our crane work and both rural and urban Educational Awareness/Environmental Education programmes. Kerryn Morrison (ICF/EWT – Africa programme) will select those crane workers in other African range states most likely to benefit from our training programmes in database management, GIS, statistics and Population Habitat Viability Analyses (PHVAs). Kevin Shaw, Ian Rushworth and Mark Anderson are South African government employees, working for their respective conservation boards. They have responsibility under the Biodiversity Act (10, 2004) to ensure that our recommendations are acted upon. They will also have input into relevant EIAs. Importantly, as they come directly under the Department for Environmental Affairs and Tourism, they will be key players in conservation at the bio-regional level. Whilst the above are all named individuals whom we know, we have broad support from a network of people in each organisation, and therefore do not anticipate problems should individuals move on. In addition, our partners are either established NGOs or Government Agencies with clear remits under South African legislation. However, a priority, should we be successful in this grant application, is to sign Memoranda of Understanding with each of our partners. Written evidence of their support from each of our partners is attached.

**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.**

For the past 10 years, SACWG has worked through-out South Africa where cranes are present (alongside the Overberg Crane Group, which is covered by V Hudson, and the KZN Crane Foundation in KwaZulu-Natal). These field-workers have built up excellent relations with many of the land-owners in the area, both private farmers and leaders of community lands. This contact (apart from its educational potential) has been essential to allow the fieldworkers on to the respective lands to carry out their work. SACWG has a large database of governmental, regional, and local authority contacts, utility companies (especially powerline) and private organisations (afforestation) that it has recourse to, most frequently when providing conservation advice & giving evidence at EIAs.

**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.**

SACWG, the Overberg Crane Group & the KZN Crane Foundation have been collecting data on South African cranes for the past 10 years. However, their financial situation has often been parlous, and much of the data has been collected on an ad hoc basis. SACWG (EWT) produced a Strategic Plan in 2004 that highlighted the following priorities over the coming five years, including developing and maintaining a comprehensive crane-related GIS database, and constructing spatial risk-sensitivity maps for the three species of crane; b) undertaking PHVAs, standardising monitoring protocols, developing standardised data models and initiating research into specific gaps in the data and specific threats; c) establishing and expanding effective Environmental Awareness/Education programmes throughout the ranges of the three species of cranes. Unfortunately SACWG lacks the skills base to implement priorities a) & b) and does not have the financial resources to employ such people. Our primary purpose is therefore simple: to provide the training, expertise and financial stability to allow SACWG to undertake this work in the future. Our tasks will include a) the construction of geo-referenced relational databases that will allow expansion as required in the future; b) the development of standardised protocols for the collection of data across all sub-populations; c) training in the use of these tools; d) development of sub-population specific PHVAs that require only the input of standard text files for their outputs; e)

explanation and training in the use (& abuse) of PHVAs; f) the employment of a GIS technician and the construction of a functional GIS unit within EWT; g) the use of this GIS expertise to import spatial layers already available in South Africa and use these to inform further research (including basic training in GIS); h) develop risk-sensitivity maps in critical crane areas and make these available to our partners for conservation advocacy; i) synthesize the results of our 3 years of work into a 2009 Strategic Plan that can be taken forward independently by SACWG, and j) to develop a robust business plan (for implementation in Yr 3) so that SACWG is financially independent and stable at the end of the Darwin programme. We will also seek to enhance what SACWG and its partners already do well, namely Environmental Awareness & Education, and advocacy. The nature of the data already collected and our range of partners also allows other avenues of work: our full programme is given in the logical framework. Principally though we will be able to feed the outputs of the project directly into the grassland and wetland programmes which form part of the South African National Biodiversity Strategies. The PHVA and spatial studies will also identify threats and sensitive demographic/ survival parameters which along with the risk-sensitivity maps will help the management of the crane populations and their habitats way into the future.

There are two other "crane" projects that we are aware of. One is Taiwana Taylor's DI project to determine micro-satellites for blue cranes and the cape parrot to ultimately set up a forensics lab for quick parentage testing of traded birds. The other "crane" project that we are aware of is one seeking US funding to look at genetic differentiation between sub-populations (Donella Young, ADU, is the SA contact point). SACWG is participating in this project to the extent of providing blood samples for analysis. The results of this work (if successful) will feed into our sub-population PHVAs. Whilst there are a number of current DI projects in southern Africa, the only two pertaining to our work are Kevin Gaston's "Capacity Building for Biodiversity Assessments During Climate Change" and Paul Racey's "Conservation of wetlands and associated biodiversity in Northern Zambia". We may be in a position to exchange GIS data layers with K. Gaston once our GIS Unit is up and running, although our purposes (and likely data requirements) will be very different. P Racey's project has important implications for the conservation of Wattled Crane in Zambia – however, their habitat here is very different to that used by Wattled Cranes in South Africa. Undoubtedly though there will be contact between this project and our own. One other DI project worth mentioning is that led by Dr Bob Smith who has assessed biodiversity hotspots in Maputaland (Mocambique, Swaziland and KwaZulu-Natal): the results of their work led to Ezemvelo KwaZulu-Natal Wildlife (EKZNW) using their results in planning applications regarding eucalyptus plantations: this is very similar to what we anticipate happening between our crane-sensitivity maps and regional planning applications assessed by the Dept. of Environment and Tourism's (DEAT's) regional bodies (e.g. EKZNW).

**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.**

Amongst other objectives, this project will train local South Africans (especially SACWG employees) in data collection and analysis. We will develop a spatial relational database and standardised data collection protocols, and use advanced statistical procedures in their analysis. The project will also build significant knowledge on crane demography, movement patterns, distributions, trends and habitat utilisation through substantial data gathering. The resultant parameters will be used in sub-population specific PHVAs, in which training will be given. A GIS unit will be set up at EWT specifically to develop crane sensitivity maps (again, training will be given), and the results of these and the PHVAs will be used to identify gaps in knowledge, especially regarding demography and for conservation purposes, including EIAs and landuse planning. Our work will also be fully integrated with the Department of Environmental Affairs and Tourism initiatives on wetlands (Working for Water), grasslands (SANBI National Grassland Biodiversity Programme) and conservation planning (National Spatial Biodiversity Assessment). Environmental Awareness and Education will also be undertaken. We will thus explicitly meet South Africa's obligations of the CBD, namely Articles 5 (5%), 6 (5%), 7 (15%), 8a, b, d, e, f, j (5%),

10a, b, c, d, e (5%), 11 (5%), 12 (15%), 13 a, b (15%), 17a, b (5%), 18,a, b (15%) and 26 (10%). Particular emphasis will be given to Agricultural Biodiversity (15%), Ecosystems Approach (15%), Inland Waters Biodiversity (15%), Protected Areas (15%), Public Education and Awareness (20%), and Sustainable Use and Biodiversity (20%).

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

The conservation of natural resources is the responsibility of every South African, just as the South African Constitution enshrines the right of every human being to enjoy a healthy and untarnished environment (Act no. 108, 1996). South Africa, as the third most biodiverse country in the world, is also one of the most progressive in terms of its environmental legislation. The country has a new Biodiversity Act explicitly to enforce and leverage the CBD, which addresses the need for species and ecosystems to be protected regardless of whether they belong to private landowners or the State. This Act entrenches the importance of environmental conservation and raises the level of responsibility which conservationists, landowners and academics must accept for conserving their natural environment. The South African Crane Working Group's Darwin Initiative Project will focus on conserving biodiversity elements, particularly cranes and their habitats in the private sector, contributing ultimately to the increase in the protected area network, through well managed properties, with a good conservation ethic, but still maintained in private ownership.

The National Spatial Biodiversity Assessment was produced in 2005 by the South African National Biodiversity Institute (SANBI), commissioned by the Department of Environmental Affairs and Tourism. The aim of this report was to present results and recommendations on the first ever comprehensive spatial assessment of biodiversity throughout the country, with the goal of mainstreaming biodiversity priorities throughout the economy of the country, making links between biodiversity and socio-economic development. Two of the key strategies identified in this assessment include: "1. Pursue opportunities to link biodiversity and socio-economic development in priority geographic areas, and 2. Focus emergency action on threatened ecosystems, to prevent further loss of ecosystem functioning." The South African Crane Working Group's Darwin Initiative Project focuses on the terrestrial biodiversity component, and will contribute to the overall achievement of these strategies by addressing crane conservation issues in two of the most threatened ecosystems in South Africa, namely grasslands and wetlands. Activities will concentrate on improving the management of these critical crane habitats, by strengthening partnerships within production sectors, for example the agricultural sector, timber industry etc., working closely with bioregional programmes, for example the National Grasslands Biodiversity Programme and Working for Wetlands, which are aimed at minimising the loss of these threatened habitats. By using the information gathered on the country's three cranes species (including their habitat needs and threats) and integrating this into national policy and legislation, particularly around water / wetland management and sustainable development, will contribute to the overall achievement of national biodiversity priorities, as identified in this recent National Biodiversity Strategy and Action Plan.

This Darwin Initiative project is essential within the context of South African biodiversity conservation, where non-government initiatives are crucial in driving the implementation of priorities identified by government structures. This DI proposal will not only build capacity but integrate and synthesize diverse activities and information within local and national Biodiversity frameworks.

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

Working for Wetlands is a programme that forms part of the South African government's nationwide Expanded Public Works Programme (EPWP), which seeks to draw significant numbers of unemployed into the productive sector of the economy, gaining skills while they work and increasing their capacity to earn income. Nested within the Environment and Culture sector of the EPWP, WfW is part of a coherent strategy for realising the sector's objectives around securing South Africa's natural and cultural heritage, while utilising this heritage to create both immediate

and long-term jobs and social benefits. This implies particular ways of working with communities, building on their historical custodianship of these resources and locating projects within a broader sustainable development context. Working for Wetlands (WfW) receives roughly £6 million annually from the South African government for wetland restoration to ensure ecologically sound ecosystem services. Part of their remit is to use labour-intensive methods of wetland restoration involving disadvantaged communities and to provide training opportunities for marginalised peoples. WfW also seeks to create sustainable livelihood opportunities for these people based on wetland resources. WfW is a partner in this DI proposal, and one of our aims is to prioritise those wetlands for rehabilitation that have either been used by cranes in the past or are currently still extant breeding sites but subject to degradation (about 20 – 25 such sites per year will be rehabilitated). This DI proposal, in collaboration with WfW, will therefore make a contribution to sustainable livelihoods amongst the disadvantaged peoples of South Africa. Similarly, our Environmental Education work, especially amongst the Environmental Awareness Officers (see Section 18) will increase employment opportunities amongst the disadvantaged.

**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.**

South Africa is a country rich in biodiversity but with urgent social needs that preclude sufficient resources being targeted at priority conservation issues. As elsewhere in the world, habitat transformation in South Africa is a major source of biodiversity loss, and is particularly relevant to the grasslands and wetlands of this country where agriculture and afforestation pressures are severe. Indeed, South African grasslands are identified as critically endangered. Furthermore, the grasslands of South Africa contain 10 of the 14 globally threatened South African bird species, half of its 34 endemic mammals, and 20% of its endemic reptiles. South Africa holds internationally important numbers of three species of crane, including the endemic blue crane. All three species are highly dependent on grassland and wetlands. Globally, cranes are amongst the most threatened of bird families, and the three South African species are listed as Critically Endangered (Blue Crane internationally, and the Wattled Crane nationally) or Vulnerable (Grey Crowned Crane both internationally and nationally), and all three populations are declining. SACWG (EWT) produced a Strategic Plan in 2004 that highlighted the following priorities over the coming five years: a) *Develop and Implement Habitat Initiatives at a Strategic Level*; b) *Initiate and Implement Relevant Conservation-based Scientific Research*; and c) *Establish and Co-ordinate Effective National Environmental Education and Awareness Initiative*. Current crane conservation work in South Africa is reliant on income to charities, and many priority actions identified by the IUCN (and the SACWG Forward Strategy) are not currently being addressed owing to lack of technical capacity and finances. However, through the efforts of individuals and the Endangered Wildlife Trust's South African Crane Working Group (SACWG), considerable data are now available and with additional key information can be synthesised into formal population projection models and risk sensitivity maps, thereby allowing the effective targeting of conservation action, in the most cost-effective manner. SACWG though lacks the skills and finances to implement these sub-population specific PHVAs and GIS-based risk sensitivity maps. The project will also benefit associated other grassland and wetland endemic species.

South Africa has also recently enacted the Biodiversity Act (10, 2004) and established the South African National Biodiversity Institute (SANBI) to explicitly accommodate the CBD. The Dept. of Environment and Tourism (DEAT) has initiated three programmes directly relevant to our proposed work, namely Working for Wetlands, the National Spatial Biodiversity Assessment and the National Grassland Biodiversity Programme. The results of both our PHVAs and the spatial sensitivity maps that we will develop in conjunction with SACWG will feed directly into these programmes. We will train the workers of SACWG as identified in the log framework, with SACWG implementing the programme on the ground in collaboration with the other stakeholders. The Conservation Leadership Group of EWT works closely in liaison with SACWG and will undertake the community-based Educational Awareness programme, and SACWG fieldworkers will continue mentoring responsible farmers in crane and habitat conservation. SACWG is an experienced campaigning group, and will continue giving input into EIAs, municipal and bioregional planning events. Our work is also central to South Africa achieving its Millennium Development Goals, especially MDG7. Our work will be disseminated by a variety of means. The electronic relational databases will be kept on a central hub which can be accessed remotely. Passwords given by SACWG to genuine

crane workers will allow remote access and querying of the databases, including colour-ring sightings. SACWG and other fieldworkers will have remote access, as will officers of DEAT organisations (eg SANBI, Working for Wetlands, regional government Conservation bodies etc). Similar principals will apply to our GIS data layers. Three workshops per year will allow all seven fieldworkers to give personal feedback on the results of their work for the relevant period, and the DI GIS technician, L Theron, R Pettifor & R Amin will give feedback of work in progress. A monthly electronic newsletter (*Grus*) will be produced and circulated 11 times per year, whilst *Crane Link* (once per year) and *Indwa Research journal* (twice per year) will be produced and circulated as hard copies. These will have updates on our current DI work. Annual reports will be produced on each of the three crane species, including sub-population demographic and other data. Our final report (and final workshop) will summarise all existing data on the three crane species in SA, and include the results of the PHVAs and risk-sensitivity maps. These annual and final reports will be made available to all interested parties, but especially crane workers and both NGO and governmental and regional conservation bodies.

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

Our first task will be to design a spatial relational database and standardised data recording sheets that will be sufficiently flexible to meet the needs of SACWG well into the future. The database will be populated with existing data, and new data collected in a format that makes entry to the national database simple and error-free. The project will also gather significant data on crane demography and habitats. A common model for annual reporting of subpopulations will be developed. Flexible PHVAs for each subpopulation will be developed, with their outputs requiring only the filling in of clearly signposted input text files. Training in all of these components will be given to SACWG workers, including the interpretation of outputs: this training will also be made available to other African range state fieldworkers. These tools will allow population growth (or decline) to be monitored well into the future (population performance), and the nature of the PHVA input files will result in outputs highlighting those demographic or other causes linked to the population behaviour to be identified. Of particular importance is the setting up of a GIS unit within EWT: EWT currently has 18 Working Groups, most of which could benefit from the analysis of spatial data, and on completion of this DI project the GIS unit and associated data layers will be made available to all EWT Working Groups (alongside relevant training), allowing future proactive planning of conservation efforts on a more holistic scale. Environmental education is also a strong component of this proposal, and qualitative evidence exists to its efficacy in crane and habitat conservation. Our expansion of the EWT Conservation Leadership Group will ensure its lasting legacy. As important as the above is the linkage of the DI programme with our SANBI partners, particularly Working for Wetlands, National Spatial Biodiversity Assessment and the National Grassland Biodiversity Programme. We will work alongside these programmes from the beginning, and the results of our PHVAs and crane-sensitivity maps will feed directly into their national remits.

#### **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.**

The programme of work described in this DI proposal, although based on priorities developed by the SACWG 2004 Forward Strategy, was put together at a Darwin Pre-proposal workshop in July 2005, involving 18 participants. Those partners who could not be present were given the outcomes via e-mail. This proposal therefore represents a “bottom-up” approach to which all our collaborators have signed up to. SACWG and the other two crane groups have already collected significant data over the past ten years – the problem is that they are all in differing formats and are of variable quality. A major initial priority is to develop a common relational database and enter “cleaned” data: this will then make demographic and other analyses of sub-population data straight-forward. The project will also significantly contribute particularly in important areas where there is lack of information (crane movement patterns, crane distribution, breeding and non-breeding sites, stage based demographic rates, population trends). Extensive field work will be undertaken throughout the project. As mentioned in 15) above, the input files for the PHVAs will be clearly labelled, and most of the outputs easily interpretable, although more complex outputs (e.g. elasticities) will be included. However, training will be given in their use – in fact, training across a spectrum of software & tools (Excel, Access, PHVAs, statistics & GIS) were all strongly requested by the

workshop participants. We have made provision for this, and to include African range state participants (see log frame). We will also be producing clear reporting structures for each region – this will ensure that all key data are collected on an annual basis across all populations, and that gaps in data/information are readily identified. A process of producing and interpreting annual status for each species and sub-population will be implemented and three annual reports will be produced during the lifetime of the project. A new Forward Strategy will also be produced at the final workshop to be held in 2009 – this will be far more strategic in outlook. It will also be closely tied to the Financial Strategy document that will be commissioned in 2008, for implementation at the start of the final year of the DI project. The purpose of this is to ensure that there is financial stability in SACWG at the end of the proposal. This Financial Strategy document will be prepared in parallel with those required by the Overberg Crane Group and EWT's Conservation Leadership Group, ensuring continuity across these major partners and SACWG. An additional key element of our exit strategy is to involve all 18 of EWT's Working Groups in basic GIS training, so that they can realise the potential of using spatial data for conservation purposes and start considering projects they would like the SACWG GIS unit (set up by the DI project) to undertake at the end of the proposal. Direct links between SACWG (and EWT) and the National Grassland Biodiversity Programme and Working for Wetlands will also have been established which will continue into the future.

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

Darwin Project logos will be advertised / used in the following manner:

- On branded clothing worn by all SACWG staff;
- On vehicles used by staff throughout the country;
- On all reports produced on the project;
- In all media and popular articles;
- On "Crane Custodianship" boards that are placed along farm road boundaries where farmers are especially conservation-minded and "crane friendly".
- Darwin funding will be acknowledged in any publications
- All crane-related work undertaken by SACWG and its partners over the lifetime of the project will be formally acknowledged/cited as joint SACWG/DI projects with logo where appropriate

**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?**

1) Training in basic, intermediate & advanced use of spreadsheets, relational databases, statistics, and GIS will be provided to the 5 SACWG, 1 OCG, & 2 DI fieldworkers at week-long training sessions held 3x per year over the 3 year programme. Other EWT Working Group members will be expected to attend (dependant on their needs) – we estimate 15 – 20 such people at each session. 2) Training will be given in fieldwork to all fieldworkers, including the filling in of standardised electronic reporting forms. 3) Training will be given in report-writing following standardised protocols. 4) Training will be given to 3 – 5 crane conservation workers employed in other African range states on an annual basis; 5) Training in using PHVAs and their interpretation will be provided to South African and range state field workers and managers; 6) BTEC, BSc Hons and MSc crane-related projects will be widely advertised in South African universities – take-up is expected to be high; 7) A short course in Advocacy and Lobbying will be given and made available to all 18 EWT Working Groups; 8) Environmental Awareness/Education. The Rural Community Awareness Programme is implemented in areas of high biodiversity by Environmental Awareness Officers (EAOs, from the local community, trained in conservation and environmental education skills to promote biodiversity conservation) and by the Biodiversity Environmental Education Project (BEEP, teacher and community leader workshops). These fall under the remit of the Conservation Leadership Group (EWT) – a partner in our programme - in conjunction with courses



held by UNISA (correspondence) and Rhodes University. It is planned that at least 10 Environmental Awareness Officers will participate annually in gaining the National Certificate: Participatory Environmental Education (NQF Level 2). In addition, currently there are plans by EWT CLG to motivate 800 teachers (10 workshops x 4 areas x 20 participants) to undertake two-day training workshops with 2 follow-up visits in order to obtain Biodiversity Awareness & Environmental Education skills using resources accredited/ supported by Department of Education), as will 200 Community Leaders (Biodiversity Awareness & Environmental Education skills using resources accredited/ supported by Department of Education and Biodiversity Legislation). The training of teachers and community leaders is based on workshopping biodiversity conservation, sustainability and environmental issues with teachers, equipping them with knowledge of the issues and the skills to bring these issues into their classrooms across all learning areas. The workshop trainers/facilitators come from several working groups within the EWT, partner NGOs (BirdLife SA, Wildlife & Environment Society (WESSA)) and provincial conservation authorities. The Department of Education supports the workshops in principle as they are in line with their Outcomes Based Education requirements. The DI monies specifically earmarked for Environmental Education will increase the number of teachers trained by 300 and the number of Community Leaders by 100 annually, whilst it is envisaged that at least 3 more Environmental Awareness Officers will be trained using DI funding. There are also further short courses for the EAOs in accredited skills development courses (drivers licence, computer, presentation, financial, time management, etc.). The teachers and community leaders are themselves trained to teach others. Currently effectiveness is measured purely on tangible changes and biodiversity conservation action (in schools and surrounding communities). This does measure the effectiveness of training in that the message has clearly been grasped and that those trained do continue training. BEEP to some extent generates documented feedback in the form of annual "Mini-Summit" where teachers and their learners present their biodiversity action projects. Developing an ongoing monitoring and evaluation system has been highlighted as a key focus area for the CLG in 2006. The success of the training of EAO's is assessed subsequently in the field, whilst the results of EE for teachers and community leaders are followed up in subsequent years by the CLG.

#### 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
<b>Goal:</b> 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"> <li>• the conservation of biological diversity,</li> <li>• the sustainable use of its components, and</li> <li>• the fair and equitable sharing of benefits arising out of the utilisation of genetic resources</li> </ul>			
<b>Purpose</b> <ul style="list-style-type: none"> <li>• To consolidate and build capacity for long term viability of cranes, associated endemics and threatened habitat in South Africa through development of sensitivity maps, population habitat viability analyses (PHVA) and training in line with government and institutional responsibilities relating to the CBD</li> </ul>	<ul style="list-style-type: none"> <li>• Improved information on the population dynamics and threats to the three crane species for effective management and implementation of crane conservation strategy.</li> <li>• Take up of recommendations by relevant SANBI programmes.</li> <li>• Training courses completed in Environmental Awareness. BTEC &amp; BSc Hons projects completed</li> </ul>	<ul style="list-style-type: none"> <li>• Detailed crane sensitivity maps, PHVAs, status reports and recommendations for population and habitat management across 3 species and related populations</li> <li>• Annual review and feedback reports from SACWG participants and partners including provincial conservation authorities</li> <li>• Accredited certificates in EA course completion</li> <li>• Completion of post-</li> </ul>	<ul style="list-style-type: none"> <li>• Long term sustainability of SACWG within the EWT and the OCG and KZN CF</li> <li>• Current support for crane conservation NGOs maintained within South Africa</li> <li>• Governmental spatial data delivered on schedule</li> <li>• South African government remains committed to the CBD and National Environmental Management: Biodiversity Act</li> <li>• Accreditation on time</li> <li>• Students complete studies on time</li> </ul>

		graduate studies	
<b>Outputs</b> <ul style="list-style-type: none"> <li>• Management recommendations from PHVA models &amp; sensitivity maps for all 3 crane species in South Africa</li> </ul>	<ul style="list-style-type: none"> <li>• Land cover &amp; wetland inventory maps consolidated by end Yr 1</li> <li>• Crane distribution, breeding and non-breeding sites, environmental variables and threats (e.g. powerlines) superimposed on maps by end Yr 2.</li> <li>• Crane demographic parameters extracted from statistical models Yr 2</li> <li>• PHVA models and sensitivity maps produced for each of the 3 crane species by the end of Yr 2</li> </ul>	<ul style="list-style-type: none"> <li>• PHVA and sensitivity map reports</li> <li>• Management reports</li> </ul>	<ul style="list-style-type: none"> <li>• Delivery of national georeferenced data on schedule</li> <li>• Relevant data available for PHVA analyses</li> </ul>
<ul style="list-style-type: none"> <li>• Information for inclusion in bioregional plans and statutory processes around threatened and protected species and ecosystems</li> </ul>	<ul style="list-style-type: none"> <li>• Management recommendations stemming from PVA and sensitivity maps by end of Yr 3</li> <li>• Advocacy of conservation strategy to relevant lead agencies by end of Yr 3</li> <li>• Contribution to the design of SANBI National Grassland Biodiversity Programme by end Yr 3</li> </ul>	<ul style="list-style-type: none"> <li>• Presentation of recommendations</li> <li>• Participation in workshops and stakeholder forums</li> </ul>	<ul style="list-style-type: none"> <li>• Recommendations taken into consideration in policy and legislation.</li> <li>• Processes will have started within relevant time frame</li> </ul>
<ul style="list-style-type: none"> <li>• Forward Strategy for National Crane Conservation 2009 - 2013</li> </ul>	<ul style="list-style-type: none"> <li>• Workshop undertaken, National Plan produced by end of Yr 3</li> </ul>	<ul style="list-style-type: none"> <li>• Documentation and Presentation</li> </ul>	<ul style="list-style-type: none"> <li>• Participation and support of all relevant organisations</li> </ul>
<ul style="list-style-type: none"> <li>• Collaborative partnership with Working for Wetlands Programme</li> </ul>	<ul style="list-style-type: none"> <li>• Prioritisation of important crane wetlands to feed into planning processes of Working for Wetlands Programme from Yr 1</li> <li>• Involvement in Working for Wetlands rehabilitation planning teams from Yr 1</li> <li>• Ground truthing of relevant wetland inventory sites by end of Yr 1</li> <li>• Initiation of Working for Wetlands projects at important crane sites including rehabilitation and poverty alleviation from Yr 1</li> </ul>	<ul style="list-style-type: none"> <li>• List of key wetlands to be included in planning</li> <li>• Rehabilitation plans</li> <li>• Populated wetland inventory database</li> <li>• Monthly project progress reports</li> </ul>	<ul style="list-style-type: none"> <li>• Government funding for Working for Wetlands Programme continues</li> </ul>
<ul style="list-style-type: none"> <li>• Capacity in advocacy and lobbying techniques</li> </ul>	<ul style="list-style-type: none"> <li>• 7 SACWG field staff &amp; 25 associated EWT WG staff trained by end Yr 1</li> </ul>	<ul style="list-style-type: none"> <li>• Numbers of staff trained</li> </ul>	<ul style="list-style-type: none"> <li>• Staff retained in present or higher positions</li> </ul>
<ul style="list-style-type: none"> <li>• South African capacity in data</li> </ul>	<ul style="list-style-type: none"> <li>• Fully operational National crane</li> </ul>	<ul style="list-style-type: none"> <li>• Crane monitoring data in database</li> </ul>	<ul style="list-style-type: none"> <li>• Staff retained in present or higher position</li> </ul>

<p>analysis including statistical methods and spatial analysis, GIS database management</p>	<p>database and manual by yr 1</p> <ul style="list-style-type: none"> <li>• 30 SACWG and other field staff &amp; associated EWT WG staff trained by end of Yr 1</li> </ul>	<ul style="list-style-type: none"> <li>• Numbers of staff trained</li> <li>• Number of status reports</li> </ul>	
<ul style="list-style-type: none"> <li>• African regional capacity built in GIS and spatial analysis including basic statistical analysis</li> </ul>	<ul style="list-style-type: none"> <li>• 3-5 AWAC staff trained by yr 1</li> </ul>	<ul style="list-style-type: none"> <li>• Number of staff trained</li> </ul>	<ul style="list-style-type: none"> <li>• Continued support from International Crane Foundation – Africa Region</li> </ul>
<ul style="list-style-type: none"> <li>• Fully functional GIS unit for management of crane and associated endemics and habitat within EWT</li> </ul>	<ul style="list-style-type: none"> <li>• GIS unit set up and operational; staff appointed and fully trained by end of Yr 1</li> </ul>	<ul style="list-style-type: none"> <li>• Number and quality of sensitivity maps and status reports</li> </ul>	<ul style="list-style-type: none"> <li>• Capacity for optimum use of unit and on-going EWT support</li> </ul>
<ul style="list-style-type: none"> <li>• Three annual standardised status reports for the 3 crane species</li> </ul>	<ul style="list-style-type: none"> <li>• Template produced by end Yr 1, workshops undertaken, status reports generated and being used for management decision making Yrs 1-3</li> </ul>	<ul style="list-style-type: none"> <li>• Number and content of reports</li> </ul>	<ul style="list-style-type: none"> <li>• Relevant information available</li> </ul>
<ul style="list-style-type: none"> <li>• Financial forward strategy for crane conservation</li> </ul>	<ul style="list-style-type: none"> <li>• Strategy commissioned (Yr 2) and implemented within Yr 3</li> </ul>	<ul style="list-style-type: none"> <li>• Report provided to SACWC</li> </ul>	<ul style="list-style-type: none"> <li>• Suitable donors available</li> </ul>
<ul style="list-style-type: none"> <li>• Expanded and enhanced community environment education programme</li> </ul>	<ul style="list-style-type: none"> <li>• Minimum of 800 school teachers and 300 community leaders trained and supported per year in accredited EE</li> <li>• 10 Environmental Awareness Officers trained per year</li> <li>• Community education and land owner programme enhanced by yr 3</li> </ul>	<ul style="list-style-type: none"> <li>• Number of trained teachers &amp; leaders</li> <li>• Progress reports</li> </ul>	<ul style="list-style-type: none"> <li>• Teachers have continued interest in EE training</li> <li>• EE accreditation on time</li> </ul>
<ul style="list-style-type: none"> <li>• Publications &amp; Publicity</li> </ul>	<ul style="list-style-type: none"> <li>• 3 scientific papers submitted by end Yr 3; EE material produced and used in schools by end Yr 1, community education and land owner awareness material produced by end Yr 1</li> </ul>	<ul style="list-style-type: none"> <li>• Number of papers submitted; publicity material sent to Darwin Initiative</li> </ul>	<ul style="list-style-type: none"> <li>• EE material being taken up by target groups</li> </ul>

<p><b>Activities</b> <b><u>Data Collection, Collation and Analysis</u></b></p>	<p><b>Activity Milestones</b> <b>Year 1:</b> 1) Employment of additional field workers; 2) Demographic &amp; habitat data collected on all 3 species across eastern grasslands, western Cape &amp; Karoo, using standardised protocols, aerial surveys and radio-transmitters; 3) Ground truthing of relevant wetland inventory sites; 4) Cleaning of existing data; 5) Setting up of EWT GIS Unit; 6) Construction of relational spatial database; 7) Sourcing and processing of GIS data layers; 8) Collation of Yr 1 field data, incorporation into national db &amp; initial statistical analyses. <b>Year 2:</b> 1) Demographic &amp; habitat data collected on all 3 species across eastern grasslands, western Cape &amp; Karoo, using standardised protocols, aerial surveys and radio-transmitters; 2) Additional spatial data collated, followed by initial sensitivity analysis and modelling; 3) Analysis of CAR counts to obtain population trends; 4) Collation of Yr 2 field data, incorporation into national db &amp; detailed statistical analyses; 5) Construction of PHVA models for all 3 spp., including population sub-structure: initial runs. <b>Year 3:</b> 1) Refinement of sensitivity maps &amp; production of final maps; 2) Final statistical analyses of demographic &amp; habitat data. Also CMR analyses of ringing &amp; sighting data to obtain robust survival estimates; 3) Update and final run of PHVA models</p>	<p><b>Assumptions</b></p> <ul style="list-style-type: none"> <li>• Able to employ suitably qualified field workers &amp; GIS staff</li> <li>• Farmers/land-owners allow field workers to carry out necessary observations</li> <li>• National geo-referenced data delivered on schedule</li> </ul>
<p><b><u>Environmental Awareness</u></b></p>	<p>1) Day-to-day contact of farmers &amp; workers by field staff; 2) Accredited EE in urban &amp; rural areas; 3) Conservation Leadership Group training of teachers in EE.</p>	<p>Local support for Conservation Leadership Group (EWT) continues.</p>
<p><b><u>Training</u></b></p>	<p>1) Training in spreadsheet, relational database, statistics, &amp; GIS and spatial analysis at entry, intermediate and advanced levels; 2) Training in fieldwork &amp; filling in pro-forma data-sheets; 3) Training in interrogation of relational databases held on central hub; 4) Training in annual reporting; 5) Training in PHVAs through interactive sessions &amp; interpretation of results; 6) Training in interpretation of risk-sensitivity maps; 7) Training in lobbying and advocacy; 8) Training of Environmental Awareness Officers; 9) Training of teachers &amp; Community Leaders in EE</p>	<p>Local support for EWT Working Groups continues</p>

<p><b><u>Management Recommendations and Action</u></b></p>	<p><b><u>Year 3:</u></b> 1) Priority crane wetland assessment (Working for Wetlands); 2) Priority crane habitat assessments (SANBI); 3) Priority area assessments from crane sensitivity maps – risk analysis (Bioregional plans, local and regional government, DEAT (Dept of Environmental Affairs &amp; Tourism), utility providers); 4) Sensitivity outputs from PHVAs and spatial maps to inform crane conservation and management, resulting in National Plan for Crane Conservation in South Africa Five-year Forward Strategy; 5) Implementation of five-year financial strategy commissioned in Year 2; 6) Advocacy of conservation strategy to relevant lead agencies; 7) Initiation of Working for Wetlands projects at important crane sites including rehabilitation and poverty alleviation</p>	<ul style="list-style-type: none"> <li>• Dept of Environmental Affairs &amp; Tourism remains committed to CBD &amp; continues financing National Grasslands Biodiversity Programme, National Spatial Biodiversity Assessment &amp; Working for Wetlands.</li> <li>• Bio-regional planning &amp; Stewardship continues under National Biodiversity Act</li> </ul>
<p><b><u>Reporting</u></b></p>	<p><b><u>Year 1:</u></b> 1) Standardised template produced for status reporting; 2) Standardised field protocols developed; 3) Status reports on each of the 3 spp; 4) Two workshops with report-backs; 5) Interim wetland characterisation report.  <b><u>Year 2:</u></b> 1) Status reports on each of the 3 spp; 2) Two workshops with report-backs; 3) Interim wetland characterisation report; 4) Financial forward strategy commissioned and received.  <b><u>Year 3:</u></b> 1) Workshop with report-backs; 2) Final project workshop with 2009 five year Forward Strategy using PHVA and sensitivity map risk assessments; 3) Final status reports of national crane situation in 2009; 4) Final listing of characteristics of priority crane wetland areas; 5) Three scientific papers submitted; 5) Community education &amp; Environmental Awareness programme progress reports</p>	<p>Project implementation timetable is kept to.</p>

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

<b>Project implementation timetable</b>		
<b>Date</b>	<b>Financial year</b>	<b>Key milestones</b>
	Apr-Mar 2006/7 Apr-Mar 2007/8 Apr-Mar 2008/9 Apr-Mar 2009/2010	

01/07/06	Apr-Mar 2006/07	Employment of GIS technician
01/07/06	Apr-Mar 2006/07	Employment of 2 field workers
01/07/06	Apr-Mar 2006/07	Expansion of Environmental Education begins
01/07/06	Apr-Mar 2006/07	2 week Workshop (regional report-back) & Training (Introduction to Excel, Access, Statistics & GIS)
01/07/06	Apr-Mar 2006/07	Planning of WfW ground-truthing & crane wetland rehabilitation
01/07/06	Apr-Mar 2006/07	Liaison with SANBI National Grassland Biodiversity Programme
14/07/06	Apr-Mar 2006/07	Standardised data collection protocols designed for demographic and habitat data recording (for workshop training)
14/07/06	Apr-Mar 2006/07	Standardised template produced for status reporting (for workshop training)
14/07/06	Apr-Mar 2006/07	Standardised monthly field reporting protocols developed (for workshop training)
01/08/06	Apr-Mar 2006/07	SACWG GIS unit set up
01/08/06	Apr-Mar 2006/07	Construction of crane relational db
01/12/06	Apr-Mar 2006/07	2 week Workshop (regional report-back) & Training (Basic Excel, Access, Statistics & GIS)
01/12/06	Apr-Mar 2006/07	Planning of WfW ground-truthing & crane wetland rehabilitation
01/12/06	Apr-Mar 2006/07	Liaison with SANBI National Grassland Biodiversity Programme
31/12/06	Apr-Mar 2006/07	Entering & cleaning of existing crane data
31/12/06	Apr-Mar 2006/07	Congruence of crane db with GIS spatial data
31/03/07	Apr-Mar 2006/07	Sourcing & processing of GIS data layers
01/04/07	Apr-Mar 2007/08	2 week Workshop (regional report-back) & Training (Basic Excel, Access, Statistics & GIS with user examples)
01/04/07	Apr-Mar 2007/08	Planning of WfW ground-truthing & crane wetland rehabilitation
01/04/07	Apr-Mar 2007/08	Liaison with SANBI National Grassland Biodiversity Programme
01/06/07	Apr-Mar 2007/08	Superimposition of GIS data layers
30/06/07	Apr-Mar 2007/08	End of Yr 1 field data collection
30/06/07	Apr-Mar 2007/08	Collation, cleaning & entry of all field data from Yr 1 into relational dbs
30/06/07	Apr-Mar 2007/08	20-25 crane related wetlands rehabilitated
01/07/07	Apr-Mar 2007/08	Superimposition of GIS data layers & crane distribution
01/07/07	Apr-Mar 2007/08	Superimposition of crane breeding, moulting & wintering areas
01/07/07	Apr-Mar 2007/08	2 week Workshop (regional report-back) & Training (Intermediate Excel, Access, Statistics & GIS)
01/07/07	Apr-Mar 2007/08	Planning of WfW ground-truthing & crane wetland rehabilitation
01/07/07	Apr-Mar 2007/08	Liaison with SANBI National Grassland Biodiversity Programme
01/07/07	Apr-Mar 2007/08	Interim (Yr 1) Wetland Characterisation Report
01/07/07	Apr-Mar 2007/08	Day-to-day contact with farmers & landowners re crane conservation, summarised annually
01/07/07	Apr-Mar 2007/08	Expansion of Environmental Awareness Officers, & training teachers & community leaders in accredited Biodiversity Awareness & Environmental Education
01/09/07	Apr-Mar 2007/08	Collation of Yr 1 data & initial statistical analyses of populations from complete crane db
01/09/07	Apr-Mar 2007/08	Annual status report on each sub-population
01/11/07	Apr-Mar 2007/08	Sourcing & processing of GIS data layers relevant to crane mortality (utilities etc)
01/12/07	Apr-Mar 2007/08	2 week Workshop (regional report-back) & Training (Intermediate Excel, Access, Statistics & GIS with user examples)
01/12/07	Apr-Mar 2007/08	Planning of WfW ground-truthing & crane wetland rehabilitation
01/12/07	Apr-Mar 2007/08	Liaison with SANBI National Grassland Biodiversity Programme
01/04/08	Apr-Mar 2008/09	2 week Workshop (regional report-back) & Training (Advanced Excel, Access, Statistics & GIS relevant to crane conservation)
01/04/08	Apr-Mar 2008/09	Planning of WfW ground-truthing & crane wetland rehabilitation
01/04/08	Apr-Mar 2008/09	Liaison with SANBI National Grassland Biodiversity Programme
01/05/08	Apr-Mar 2008/09	Initial spatial risk-sensitivity maps produced for all key crane areas
01/06/08	Apr-Mar 2008/09	Initial construction & parameterisation of population-specific PHVAs
30/06/08	Apr-Mar 2008/09	Financial Forward Strategy drafted & circulated
30/06/08	Apr-Mar 2008/09	End of Yr 2 field data collection
30/06/08	Apr-Mar 2008/09	Collation, cleaning & entry of all field data from Yr 2 into relational dbs
30/06/08	Apr-Mar 2008/09	20-25 crane related wetlands rehabilitated
01/07/08	Apr-Mar 2008/09	2 week Workshop (regional report-back) & Training (Statistics, GIS & PHVAs)
01/07/08	Apr-Mar 2008/09	Planning of WfW ground-truthing & crane wetland rehabilitation
01/07/08	Apr-Mar 2008/09	Liaison with SANBI National Grassland Biodiversity Programme
01/07/08	Apr-Mar 2008/09	Interim (Yr 2) Wetland Characterisation Report
01/07/08	Apr-Mar 2008/09	Day-to-day contact with farmers & landowners re crane conservation, summarised annually
01/07/08	Apr-Mar 2008/09	Expansion of Environmental Awareness Officers, & training teachers & community leaders in accredited Biodiversity Awareness & Environmental Education
01/08/08	Apr-Mar 2008/09	Ground-truthing of relevant wetland sites completed
01/09/08	Apr-Mar 2008/09	CMR analyses of all crane ringing data
01/09/08	Apr-Mar 2008/09	Financial Forward Strategy accepted & implemented
01/10/08	Apr-Mar 2008/09	Detailed statistical analyses of crane db completed

01/10/08	Apr-Mar 2008/09	Detailed statistical analyses of crane counts from CAR completed
01/10/08	Apr-Mar 2008/09	Detailed sensitivity analyses of PHVAs using updated parameters
01/10/08	Apr-Mar 2008/09	Collation of all remaining available data for risk sensitivity maps
01/12/08	Apr-Mar 2008/09	2 week Workshop (regional report-back) & Training (Statistics, GIS & PHVAs as applied to cranes)
01/02/09	Apr-Mar 2008/09	Final spatial risk-sensitivity maps produced for all key crane areas
01/02/09	Apr-Mar 2008/09	Five-year Forward Strategy drafted & circulated
01/03/09	Apr-Mar 2008/09	Draft final report on demography, distribution, threats & trends from PHVAs & risk-sensitivity maps
31/05/09	Apr-Mar 2009/10	Final DI report discussed & agreed at final workshop by all stakeholders
31/05/09	Apr-Mar 2009/10	2 week Final Workshop, including 5-yr forward strategy & financial plan, plus threat assessment prioritisation
31/05/09	Apr-Mar 2009/10	Full discussion of PHVAs & risk-sensitivity maps
31/05/09	Apr-Mar 2009/10	Wetland Characterisation Report (Yr 3)
31/05/09	Apr-Mar 2009/10	Five-year Forward Strategy accepted & implemented
31/05/09	Apr-Mar 2009/10	Priority crane wetland assessment (with Working for Wetlands)
31/05/09	Apr-Mar 2009/10	Priority crane habitat assessments (with SANBI National Grasslands Biodiversity Programme)
31/05/09	Apr-Mar 2009/10	Priority crane habitat assessments (with SANBI National Spatial Biodiversity Assessment)
31/05/09	Apr-Mar 2009/10	Priority area assessments from crane sensitivity maps
31/05/09	Apr-Mar 2009/10	Mandate SACWG to carry priority conclusions through to Dept of Environmental Affairs & Tourism, Bio-regional planning, local and regional government
31/05/09	Apr-Mar 2009/10	Advocacy of conclusions to other relevant bodies
31/05/09	Apr-Mar 2009/10	Day-to-day contact with farmers & landowners re crane conservation, summarised annually
30/06/09	Apr-Mar 2009/10	Final DI report produced
30/06/09	Apr-Mar 2009/10	Papers submitted (Factors determining survival in South African cranes; Crane distribution, breeding success & habitat utilisation in South Africa; Risk-sensitivity maps and PHVAs in conserving vulnerable & endangered crane species)
30/06/09	Apr-Mar 2009/10	End of Yr 3 field data collection
30/06/09	Apr-Mar 2009/10	Collation, cleaning & entry of all field data from Yr 3 into relational dbs
30/06/09	Apr-Mar 2009/10	20-25 crane related wetlands rehabilitated

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

PROJECT OUTPUTS		
Year/Month	Standard output number (see standard output list)	Description (include numbers of people involved, publications produced, days/weeks etc.)
2007/June	3	10 South African Environmental Awareness Officers trained (3 from DI funds)
2007/June	3	800 Teachers & 300 Community Leaders (South Africans) trained in Environmental Education skills (200 & 100 respectively from DI funds)
2007/June	4A	3 (South African)
2007/June	4B	8
2007/June	4C	2 (South African)
2007/June	4D	16
2007/June	6A	1 South African GIS technician trained Yr 1
2007/June	6B	3 wks intensive plus regular e-mail contact
2007/June	6A	2 South African Fieldworkers trained Yr 1
2007/June	6B	3 wks intensive plus regular e-mail contact
2007/June	6A	25-30 Fieldworkers & Managers from SA trained in basic spreadsheet, database, statistics & GIS + 3-5 African range state crane workers
2007/June	6B	3 training weeks
2007/June	7	5
2007/June	8	6 weeks
2007/June	12A	5 (Relational crane db; Ringing db; Habitat db; Spatial crane wetland db, GIS data layers)
2007/June	14A	3 1-week long workshops
2007/June	15A	3
2007/June	15B	30
2007/June	16A	3 (Grus (electronic, 11 per yr), Crane Link, 1 per yr, Indwa 2 per yr) - all will report on DI activity

2007/June	16B	300
2007/June	16C	50 (international)
2007/June	17A	3 1-week workshops
2007/June	17B	Annual SACWG conference
2007/June	18A	2
2007/June	19A	2
2007/June	19C	2
2007/June	20	£75,000
2007/June	22	30
2007/June	23	£240,000"
2008/June	3	10 South African Environmental Awareness Officers trained (3 from DI funds)
2008/June	3	800 Teachers & 300 Community Leaders (South Africans) trained in Environmental Education skills (200 & 100 respectively from DI funds)
2008/June	4A	2 (South African)
2008/June	4B	8
2008/June	4C	1 (South African)
2008/June	4D	16
2008/June	6A	1 South African GIS technician trained Yr 2
2008/June	6B	3 wks intensive plus regular e-mail contact
2008/June	6A	2 South African Fieldworkers trained Yr 2
2008/June	6B	3 wks intensive plus regular e-mail contact
2008/June	6A	25-30 Fieldworkers & Managers from SA trained in intermediate spreadsheet, database, statistics & GIS + 3-5 African range state crane workers
2008/June	6B	3 training weeks
2008/June	7	5
2008/June	8	6 weeks
2008/June	12B	5 (Relational crane db; Ringing db; Habitat db; Spatial crane wetland db, GIS data layers)
2008/June	14A	3 1-week long workshops
2008/June	15A	3
2008/June	15B	30
2008/June	16A	3 (Grus (electronic, 11 per yr), Crane Link, 1 per yr, Indwa 2 per yr) - all will report on DI activity
2008/June	16B	300
2008/June	16C	50 (international)
2008/June	17A	3 1-week workshops
2008/June	17B	Annual SACWG conference
2008/June	18A	2
2008/June	19A	2
2008/June	19C	2
2008/June	20	£75,000
2008/June	22	30
2008/June	23	£240,000
2009/June	3	10 South African Environmental Awareness Officers trained (3 from DI funds)
2009/June	3	800 Teachers & 300 Community Leaders (South Africans) trained in Environmental Education skills (200 & 100 respectively from DI funds)
2009/June	6A	1 South African GIS technician trained Yr 2
2009/June	6B	3 wks intensive plus regular e-mail contact
2009/June	6A	25-30 Fieldworkers & Managers from SA trained in advanced spreadsheet, database, statistics & GIS + 3-5 African range state crane workers
2009/June	6B	3 training weeks
2009/June	7	5
2009/June	8	6 weeks
2009/June	9	5
2009/June	11B	3
2009/June	12B	5 (Relational crane db; Ringing db; Habitat db; Spatial crane wetland db, GIS data layers)
2009/June	14A	3 1-week long workshops
2009/June	15A	3



2009/June	15B	30
2009/June	16A	3 (Grus (electronic, 11 per yr), Crane Link, 1 per yr, Indwa 2 per yr) - all will report on DI activity
2009/June	16B	300
2009/June	16C	50 (international)
2009/June	17A	3 1-week workshops
2009/June	17B	Annual SACWG conference
2009/June	18A	2
2009/June	19A	2
2009/June	19C	2
2009/June	20	£75,000
2009/June	22	30
2009/June	23	£240,000

### PROJECT BASED MONITORING AND EVALUATION

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

Leon Theron, Manager of SACWG, will be responsible for the running of the project in South Africa – he is in weekly contact with the fieldworkers, carries out field visits, and will be in daily office contact with DI GIS technician. In addition, electronic monthly reports from the seven fieldworkers will be submitted according to standardised protocols: these will be assessed by both L Theron and the UK Fellows. Updates of our progress will also be highlighted in the local crane newsletters, and at six-monthly interval reports to the Darwin Initiative. Three workshops & training platforms will be held each year: all partners will be invited to the workshops (& will be expected to attend). Before each workshop, two agenda items will be completed: 1) a list of work expected to be completed by that date (from both log frame and project implementation timetable), including over-runs from previous workshops, and 2) a list of work expected to be completed before the next workshop. These 2 agenda items will be discussed in detail at each workshop to ensure delivery of outputs on time and used to produce formal annual plans. These workshops, at which the fieldworkers will be participants, will also allow practical difficulties to be aired, discussed and resolved. Many of the workshop participants are experts in their field: K McCann (cranes), T Smith (grasslands), B Reyers (remotely sensed data), J Dini (wetlands): they will ensure that our key outputs are on the “right” track (e.g. PHVAs & risk-sensitivity maps), whilst they and the government conservation officers at the meetings will provide advice concerning how we maximise the use of our outputs in effective conservation planning. Integration of our grassland work with T Smith (SANBI National Grassland Biodiversity Programme) and both our wetland ground-truthing and wetland rehabilitation prioritization for cranes with J Dini (Working for Wetlands) will be discussed and integrated at each Workshop. A final two-week workshop will be held before closure of the project to which all participants and partners will be invited. We will review our outputs in detail, discuss the conservation implications of our work, and draw up a detailed further 5-year Forward Strategy for crane-conservation in South Africa.