

Darwin Initiative Annual Report

Darwin Project Information

Project Ref Number	15/002
Project Title	Integrating Crane Conservation with Sustainable Habitat Utilisation
Country(ies)	Principally South Africa
UK Contract Holder Institution	Zoological Society of London
UK Partner Institution(s)	N/A
Host country Partner Institution(s)	South African Crane Working Group, Endangered Wildlife Trust (SACWG, EWT). Other host country partners are as listed in original application.
Darwin Grant Value	£ 239,577
Start/End dates of Project	1 July 2006 – 30 June 2009
Reporting period (1 Apr 200x to 31 Mar 200y) and annual report number (1,2,3..)	1 July 2006 – 31 March 2007 Annual Report #1
Project Leader Name	Richard A PETTIFOR
Project website	N/A
Author(s), date	RA Pettifor, L Theron (Manager, SACWG) 27 April 2007

1. Project Background

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.

2. Project Partnerships

Following the announcement of our successful grant application, I notified all of our 14 partners, arranging a pre-project planning workshop to be held in the first week of July 2006, at the Endangered Wildlife Trust's (EWT) headquarters at Johannesburg Zoo. Leon Theron (LT), Manager of the South African Crane Working Group (SACWG), is our host country PI. He and I communicated extensively by e-mail, & on occasion, by phone, arranging all the pre-project planning. Leon and I remain in frequent contact over management of the project (I have received over 400 e-mails from Leon since the start of this project, & LT will have received a similar number from me: we are thus in touch at least weekly (often a number of times daily) clarifying issues on the project): having such a dedicated and responsive PI in the host country has been an incredibly positive aspect of managing such a complex project at distance. Having most of our project partners present at the launch of the project has made subsequent requests for data etc extremely straight-forward (e.g. the recent week-long trip by Dr Raj Amin & Kirsten

Oliver (the South African Darwin GIS person) to holders of various remotely sensed spatial layers was greatly facilitated by this early contact). Similarly, spending four days of intensive discussion, coupled with overviews of aspects of our work (eg 2 hr long lectures on the basics of population dynamics, PVA modelling etc) and detailed planning of our first year of work has meant that each of the SACWG staff members went away with very clear ideas as to what was expected of them regarding data collection. The additional week I then spent with Leon following this initial meeting was essential for both fine-tuning our detailed plans, and for budgetary planning. The presence of Sharon Magro, Fundraiser and Marketing Coordinator for SACWG, at these meetings was extremely useful too in that accounting procedures has been relatively straight-forward. On each of our three visits to date to South Africa we have also attempted to visit at least some of our other partners on each occasion and thus keep them in the loop. These visits have also been followed up by e-mails to all our colleagues, informing them of progress (and often requesting either data or their input into ideas we are developing). Thus our links with the CBD nodes of the South African government (both sections of the Dept of Environment and Tourism (DEAT) and the South African National Biodiversity Institute (SANBI)) is of high quality and will ensure that cognisance is taken of our final work outputs.

Thus, after our first 9 months, there are a number of positive aspects to report. Highlights would include 1) development of a relational database that will meet SACWG's data collation and curation needs well into the future; 2) acquiring, screening and cleaning of essential spatial data layers; 3) the collection of high-quality field data relating to the breeding performance of blue cranes by SACWG/DI field staff, as requested at our initial meeting; 4) The development of fixed monthly census routes through each of the key crane areas (3 routes per area, each route ca 60km in length) will ensure that both an index of crane numbers and accurate changes to habitat will be monitored well into the future; 5) the training of SACWG staff, and the resulting increase in confidence and camaraderie that has resulted; 6) the environmental awareness component that has seen a large number of land-holders, farmers, and their labourers respond positively to the conservation message brought by the field-workers, alongside the more formal Environmental Education undertaken by EWT Conservation Leadership Group (CLG) staff under difficult circumstances (see below).

However, there have been some unexpected difficulties. The first revolves around employing the relevant staff members we needed. This is detailed in 3.1 below regarding the GIS post (and here it is understandable, in that black candidates with GIS skills are heavily sought after by the mining industry at salaries way above what we could afford), but also included difficulties in finding suitably qualified fieldworkers (the one we employed was found by word of mouth), and post-graduate students willing to take on field work towards their MSc's, despite offering very attractive bursaries. These last two difficulties are difficult to reconcile with Leon Theron's previous experience, and indeed, many of the Heads of Departments whom we contacted have expressed surprise too. Despite these difficulties, we outline below why we believe on current evidence that we will remain on track with the GIS work. With respect to field work, we have decided on three strategies: 1) Diverting money to 20 satellite transmitters for attachment to blue cranes wintering in two key regions: their movements are crucial to formulating effective conservation plans; 2) Allocating some of the Darwin fuel monies to SACWG staff fuel budgets, thus ensuring through reprioritising their objectives that the relevant field-based parameters necessary for PVA modelling are still collected; and 3) undertaking initial risk-sensitivity mapping and PVA modelling as of June this year, rather than leaving both activities until the final year. Undertaking these two key tasks at this earlier date should high-light potential problem areas sooner, thus potentially enabling us to plug the gap(s) whilst still in receipt of Darwin funding.

A final difficulty pertains to our decision to leave all "formal" Environmental Education in the hands of the Conservation Leadership Group, another working group of EWT specialising in this area of work. Unfortunately, our project start date coincided with the South African government blocking any further lottery funding until this organisation (the Lottery) had been properly audited: a grant application to the lottery board by the CLG had been favourably reviewed at the time we wrote the Stage 2 application, and it was anticipated that our EE work would seamlessly fit in with their expanded role. The South African government has yet to release these monies. In addition, the CLG has also lost two key members of staff over the past 9 months, and the current Head of the CLG has announced very recently that he is standing down. We attach a report specifically detailing the EE achievements in the first 6 months of the project, and it can be seen that we are basically on track regarding numbers trained. We are also fortunate in that Leon Theron is based in KZN, where both an experienced EE person is located as well as two of the five Rural Extension Officers. Further, WESSA (Wildlife and Environment Society of South Africa), who are the leaders of accredited EE in South Africa, are also based in Howick (where LT resides): if there is no resolution to the situation regarding the CLG at EWT's headquarters in the foreseeable future, we will negotiate for WESSA to undertake the specified EE.

In conclusion, despite difficulties and the associated problems of managing projects “at distance”, the rapport that Leon and I have established has meant that solutions to problems have been quickly identified, and we remain quietly confident of achieving our objectives and outputs on schedule.

3. Project progress

The project started off in July 06 with a week long workshop, primarily involving SACWG staff, although other key host partners were present at relevant points. RA Pettifor (RAP) and Raj Amin (RA) had flown out to Johannesburg at the start of the preceding week in order to assist Leon Theron (LT) interviewing candidates short-listed for the Darwin GIS post. RAP, RA & LT then spent the remainder of this first week finalising work plans and budgets for the coming year. We then spent a large part of the workshop discussing both the overall objectives and the specifics for the coming year with all SACWG staff. In addition, training sessions were held by RAP & RA that involved a large proportion of EWT staff (25 – 30 attendees). Various host country partners also attended part or all of the week-long workshop. A further week was spent by RAP & LT at the end of the workshop, attending to issues that had arisen during the workshop and reassessing budget lines. This latter was done in collaboration with Sharon Magro, SACWG Fundraiser and Marketing Coordinator.

RAP returned to SA at end of October and had a week long meeting with LT, addressing the problems around staffing shortfalls (see above & 3.1/3.2) and finalising data collection protocols amongst other issues. A clear plan of action was decided and acted upon, that included getting the Overberg Crane Group to collect data in the Swartland, employ a fieldworker for 6 months in the Free State/Mpumalanga/KZN triangle, and target post-graduates for MSc work via “Darwin Bursaries” (see below).

RA and RAP returned to SA in March 2007, with five main objectives: 1) Review data collection with field-workers; 2) Finalise relational data base; 3) Collect and collate remotely-sensed, spatial data layers; 4) Review and draw up action plans for catching adult cranes and attaching transmitters to them, and 5) Provide training in Excel. In addition, RAP, LT & Sharon Magro reviewed and agreed the 06/07 expenditure, and finalised the budget for 07/08.

Details of the above and any additional work, alongside operational difficulties, measured against Outputs and Milestones, are given below.

3.1 Progress in carrying out project activities

Progress against Activities relating to Log-frame Outputs relevant to Year 1

Management Recommendations from PVA & sensitivity maps:

Activities: Data Collection, Collation, and Analysis. 1) Spatial layers from the National Land Cover 2000 project (using Landsat Thematic Mapper imaging, 2000 – 2001) was obtained in March 2007 from the Council for Scientific and Industrial Research (CSIR). 1:10 000 digital orthophotos covering the whole of South Africa and a range of other spatial shapefiles were obtained from the Chief Directorate, Surveys & Mapping. In addition, detailed infrastructure layers were obtained from Eskom, allowing accurate plotting of powerlines (major causes of crane mortality), roads etc that will be used in the risk sensitivity work. SANBI National Grassland Biodiversity mapping discussed with manager, and wetland inventory ground-truthing discussed with Working for Wetlands. All additional relevant GIS data layers sourced and obtained and some agreements for ongoing updates of dynamic data sets were discussed. These remotely sensed data are being assessed with respect to metafiles and accuracy (ground-truthing). 2) A relational database has now been finalised that seamlessly links data collected in the field on PDA or filled in on Excel spreadsheets through to MS Access database. Historical data are being tracked down and collated, and some of these data are already being cleaned for inclusion into current database. 3) Three fixed census routes per region (each route ca 60km) established & currently being geo-referenced with respect to habitat: will allow an index of crane numbers to be collected over time plus accurate metric obtained for habitat change. 4) CAR (Co-ordinated Avifaunal Roadcount) data, collected since 1991 by Avian Demographic Unit, University of Cape Town, collected. Initial statistical analyses to be undertaken by end June 2007. 5) Breeding productivity parameters were targeted as a priority data by the fieldworkers, with 99 nests followed through to fledging. 6) Aerial surveys undertaken in Eastern Cape, Karoo, KZN and Mpumalanga. Flights undertaken by the “Bateleurs”, who gave freely of their time and aircraft. 7) Ground-truthing of wetland sites undertaken in collaboration with Working for Wetlands. This is an ongoing aspect of our work: to date, 91 have been verified. 8) Setting up EWT GIS Unit. The employment of a suitably qualified GIS post graduate was to have been our first Darwin

appointment, and to this end adverts were placed in May 2006. Of some 20 applicants, four were short-listed. RAP, RA & LT interviewed these candidates in the last week of June 2006, and the position was offered to one of the candidates. She had another interview, which we agreed she should attend. At the end of July, she decided to take up this latter post. We then approached a second candidate whom we had interviewed – this person had extensive experience in GIS, and was clearly “over-qualified” regarding the salary we were offering, but would have done an excellent job. Unfortunately, whilst we attempted to maximise the salary payable to him, this proved insufficient for him to take the post. LT then approached various university lecturers and other contacts, but drew a blank. We re-advertised in October, and were successful in attracting an excellent candidate, who started with us in February 2007. We are currently reasonably optimistic that all our objectives can remain on target time-wise, although this will depend on a) how smoothly the transfer goes of importing historical data onto the new relational database, and b) the accuracy of the relevant GIS spatial layers. It is worth noting here that candidates with the particular skills we were looking for amongst recent undergraduates (database & GIS) are particularly sought after in South Africa at present, and thus attracting students of sufficient quality at the salary we were offering was difficult. Having said that, we are facing two further difficulties in recruitment: a) obtaining good, dedicated field-workers ready to take on short-term (6 month) contracts, and b) finding suitable Masters by Research students, willing to carry out designated projects, despite offering very reasonable bursaries. To ensure that we still meet our objectives, we have a) re-prioritised the data collected by the existing SACWG staff; b) contributed to field expenses incurred by the Overberg Crane Group to ensure that data are also collected in the Swartland; and c) made a decision to invest heavily in satellite transmitters: 20 will be attached to cranes over the coming year (see attached letters to Margaret Okot). Currently we thus feel confident in meeting our objectives on time.

Environmental Education:

Activities: Environmental Education and Awareness both by SACWG/DI staff and Conservation Leadership Group.

As part of daily conservation activities all field staff are in contact with private landowners and other rural community people including farm workers. All staff make use of these opportunities to educate these important role players on various aspects of crane and other associated endemic conservation and more importantly their respective habitats. Typically, landowners receive information on biodiversity friendly agricultural practices such as correct placement of dams, timing of grazing and fires, removal of invasive alien vegetation and rehabilitation of wetlands. Furthermore assistance is given to mitigate direct threats to cranes such as removal of bailing twine, prevention of chick drowning, marking of powerlines with bird scaring devices and advice on correct agrochemical use.

For the reporting period a total of 612 landowners and rural communities were visited by SACWG/DI staff and exposed to crane conservation awareness activities. In turn landowners have assisted with monitoring of nesting pairs and giving feedback to crane field staff on powerline and other mortalities. It is particularly farm workers that have helped field staff locate nest sites and chicks that can be ringed.

Furthermore CLG Environmental Awareness Officers gave training on biodiversity conservation matters and environmental pollution to 95 farm workers. Farm workers often find themselves in conflict situations with wildlife and are often poorly trained in environmentally friendly practices such as the necessity of avoiding chemical spills in water and the like. The EAOs educate them on such matters.

In addition, the Environmental Awareness Officers, in the six-month period Jul 06 – Dec 06, visited 62 schools and provided supplementary EE to 150 teachers, whilst assisting in 18 lesson plans. An extremely important role these EAOs have taken on is to work with municipalities and provincial leaders, especially those in charge of planning and development. To date, 22 such leaders have been visited with educational material covering such issues as biodiversity function and ecosystem services. The EAOs have also formed collaborations with eight other NGOs. Three of the EAOs have themselves qualified for accredited EE Learnerships.

Training

Activities: Training in various analytic procedures. At the start of the project, Introductory Overviews of 1) Population Dynamics; 2) Population Viability Analyses; 3) Relational Databases; and 4) GIS were given to 25 – 30 EWT staff by RAP & RA. In March 2007, RAP gave an intensive training course over two days to SACWG staff plus one CLG member in the use of Excel. The trainees had varying degrees of familiarity with the package – by the end of the course, which involved considerable hands on activity of “messy” crane data, each trainee was able to use key functions, including Pivot Tables and Lookup Tables, as well as graphically presenting data to a standard suitable for presentations and/or publication.

3.2 Progress towards Project Outputs

Taken from outputs listed in our log-frame relevant to Year 1

Management recommendations from PVAs & risk-sensitivity mapping. Activity 1) Land cover & wetland inventory maps consolidated by end Year 1. Our initial goal is to get the relational database functioning seamlessly with both the fieldworkers current data and for importing extant data. Given the 7 month delay in recruiting a GIS person, this potentially leads to delays regarding the above spatial data. However, we do not anticipate major problems with the landcover maps, although the wetland maps require considerable ongoing ground-truthing. On the other hand, the quality of the shape files for other data (eg powerlines) is of higher quality than anticipated, and we may thus be carrying out Year 2 activities in Year 1 and vice-versa. As discussed above, no major delays anticipated at this stage, but to be kept under review. Both PVAs and Risk-sensitivity Mapping for Wattled Crane are planned to be undertaken from June 2007, that is, one year earlier than planned.

Bioregional planning. All activities here planned to occur in Year 3: However, LT is in frequent contact with Working for Wetlands and Ezemvelo KZN Wildlife, Cape Nature and Northern Cape Dept of Tourism, Environment & Conservation, as well as various sections of SANBI (eg Dr Phoebe Barnard; Birds as Indicators of Climate Change and Jessica Conradie – Compiling National Indicators of Biodiversity). In other words, we feel confident that our project recommendations will feed into bioregional planning as envisaged in the proposal.

Partnership with Working for Wetlands. Considerable collaboration has occurred between SACWG and WfW regarding ground-truthing wetlands for the wetland inventory. We plan to ensure that maps of key wetlands for cranes are populated and identified by June 2007 for inclusion in the WfW Planning Process regarding wetland rehabilitation.

Capacity in Lobbying & Advocacy. Planned for 2007, a training course has already been identified and will be attended by all relevant staff in October 2007.

SA Analytic Capacity. Overview courses given in Population Dynamics, Population Viability Analyses, Relational Databases and GIS (July 06). 2-day intensive training given in uses of Excel in analysing and presenting data, with particular emphasis given to the Lookup and Pivot Table functions alongside graphical ability (March 07). A week-long GIS course is planned for September 07, followed by training in PVA software (Unified Life Models) and statistics. We are therefore on course for capacity building of South African field-workers.

African range state Analytic capacity. More problematic is finding funding to allow African regional partners to attend these training sessions – communication is ongoing with Kerryn Morrison (ICF Africa representative).

GIS Unit set up. See comments above (3.1) on delay in appointing suitably qualified person. Despite 7 month delay, we are reasonably confident of meeting targets on time.

Annual Crane reports. Templates discussed, but decided not to go down this route at this point. LT receives monthly reports from his field workers, and these are pulled into annual reports. At some stage this process needs revisiting, but is not considered a priority.

Financial Forward Strategy: Planned to be undertaken in Year 2 as per proposal.

Community & Environmental Education. This work consists of two parts – 1) that undertaken by the field-workers in their day-to-day contact with framers, land-owners, and farm labourers. This has gone to plan with a large number of farm visits, allied with a SACWG stall at farmer events, the most important being the National farmers gathering (Nampo), attracting 70,000+ visitors, the largest agricultural show in the southern hemisphere. 2) The second aspect concerns community environmental education and was undertaken by the Conservation Leadership Group within EWT. Owing to staff changes and losses, plus difficulties with a large grant application, this has been slow to take off in the manner anticipated. However, to date a) the five Environmental Awareness Officers (EAOs) worked closely with 153 teachers at their individual schools, with an average of 7 sessions per teacher, b) were involved in 26 community based eco-tourism, food gardening and greening projects, c) participated in 33 environmental workshops held by provincial authorities and NGOs. d) However, funding constraints resulted in only 4 teacher workshops being run through the Biodiversity Environmental Education Project (BEEP) in the KZN Midlands, EAOs held no teacher workshops, but two (Mpinda Radebe and Steven Segang) are currently

being planned for April 2007 with confirmed numbers of teachers attending at 65, these workshops will be compared against the cost and effectiveness of working with teachers directly at schools to determine if workshops or direct contact at schools is the most effective option. e) The EAOs interacted with 22 municipal and provincial conservation education project leaders. f) A total of 18 lesson plans were developed by the EAOs with teachers using available resources from Share-Net. These lesson plans are related directly to environmental issues that are relevant to the school's local environment. g) EAO training; three of the five EAOs were selected by WESSA to participate on the first EE accredited learnership. The remaining two EAOs met the selection criteria, but do not operate in the learnership's area of preference for funding.

Publications and Publicity. Publicity is listed in Table 2. No publications were planned for Year 1.

3.3 Standard Output Measures

Table 1 Project Standard Output Measures

Code No.	Description	Year 1 Total	TOTAL
Established codes			9 months
3	10 South African Environmental Awareness Officers trained (3 from DI funds)	0 (lack of lottery funding – see above)	0 (6 mo)
3	800 Teachers & 300 Community Leaders (South Africans) trained in Environmental Education skills (200 & 100 respectively from DI funds)	153 and 31 (first six months only)	184 (6 mo)
4A	3 (South African)	1	1 (9 mo)
4B	8	6	6
4C	2 (South African)	3	3
4D	16	12	12
6A	1 South African GIS technician trained Yr 1	1	1
6B	3 wks intensive plus regular e-mail contact	3	3
6A	2 South African Fieldworkers trained Yr 1	2	2
6B	3 wks intensive plus regular e-mail contact	3	3
6A	25-30 Fieldworkers & Managers from SA trained in basic spreadsheet, database, statistics & GIS + 3-5 African range state crane workers	Variable, ranging from 8 core – 30. None from range states	Variable, ranging from 8 core – 30. None from range states
6B	3 training weeks	2	2
7	5	4	4
8	6 weeks	10	10
12A	5 (Relational crane db; Ringing db; Habitat db; Spatial crane wetland db, GIS data layers)	5db + 10+ spatial data sets	5db + 10+ spatial data sets
14A	3 1-week long workshops	2	2
15A	3	3	3
15B	30	4	4
16A	3 (Grus (electronic, 11 per yr), Crane Link, 1 per yr, Indwa 1 per yr) - all will report on DI activity	3	3
16B	300	300	300
16C	50 (international)	50	50
17A	3 1-week workshops	3	3
17B	Annual SACWG conference	1	1
18A	2	1	1
19A	2	1	1
19C	2	2	2
20	£75,000 (over 3 yrs)	£25,000	£25,000
22	30	20	20
23	£240,000 (over 3 yrs)	£50,000	£50,000
NOTE	ALL OF ABOVE PROJECT OUTPUTS HAVE A COMPLETION DATE OF END JUNE 2007	FROM JUL 06 – MAR 07	
New project specific measures			

2	MSc's primarily by research	3	3
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In Table 2, provide full details of all publications and material produced over the last year that can be publicly accessed, eg title, name of publisher, contact details, cost. Mark (*) all publications and other material that you have included with this report.

Table 2 Publications

Type * (eg journals, manual, CDs)	Detail (title, author, year)	Publishers (name, city)	Available from (eg contact address, website)	Cost £
EWT Membership Magazine	Our National Bird; Glenn Ramke; July 2006	Endangered Wildlife 57	Sharon Magro crane@ewt.org.za http://www.ewt.org.za/home.aspx	N/A
National & Regional Newspapers	AGRICOL Crane census; Leon-Jacques Theron; July 2006	Press release	Sharon Magro crane@ewt.org.za http://www.ewt.org.za/home.aspx	N/A
National Newspapers	KZN landowners urged to count cranes; Craig Bishop; July 2006	Natal Witness	Sharon Magro crane@ewt.org.za http://www.ewt.org.za/home.aspx	N/A
National Newspapers	Dit is sensustyd vir alle "vyfsentvoëls".; Jorisna Bonthuys; July 2006	Die Burger	Sharon Magro crane@ewt.org.za http://www.ewt.org.za/home.aspx	N/A
National Television	Morning Live TV appearance; Leon- Jacques Theron; July 2006	SABC	Sharon Magro crane@ewt.org.za http://www.ewt.org.za/home.aspx	N/A
Regional Newspapers	Eastern Cape Region: Rand Merchant Bank Crane Conservation Project; Mark van Niekerk; July 2006	Barkly East reporter	Sharon Magro crane@ewt.org.za http://www.ewt.org.za/home.aspx	N/A
Regional Radio	The Karoo Crane Conservation Project; Bradley Gibbons; July 2006	Radio Graaff- Reinet	Sharon Magro crane@ewt.org.za http://www.ewt.org.za/home.aspx	N/A
National Newspapers	Count the Cranes on your Property; Leon- Jacques Theron; July 2006	Sunday Tribune	Sharon Magro crane@ewt.org.za http://www.ewt.org.za/home.aspx	N/A
EWT Membership Magazine	A new era dawns for crane conservation in South Africa – the South African Crane Working Group receives a prestigious Darwin Initiative grant; Sharon Magro & Leon-Jacques Theron; Sept 2006	Endangered Wildlife 58	Sharon Magro crane@ewt.org.za http://www.ewt.org.za/home.aspx	N/A
Talk	"Conservation and the City Slicker"; Leon- Jacques Theron; Sept 2006	EWT Monthly Johannesburg Country Club - Presentation	Sharon Magro crane@ewt.org.za http://www.ewt.org.za/home.aspx	N/A
Talk	Kraanvoëls van Suid- Afrika; Jacques Theron; Sept 2006	Presentation at Laerskool Louw Geldenhuis	Sharon Magro crane@ewt.org.za http://www.ewt.org.za/home.aspx	N/A
Regional Newspapers	Blue Cranes nesting; Glenn Ramke; October 2006	Harrismith Chronicle	Sharon Magro crane@ewt.org.za http://www.ewt.org.za/home.aspx	N/A
EWT Membership Magazine	The acronym soup and timeline of the SACWG; Theron <i>et al.</i> , 2006	EWT Vision Annual	Sharon Magro crane@ewt.org.za http://www.ewt.org.za/home.aspx	N/A
Crane	<i>Grus</i> , Monthly, Jul 06 –	SACWG, EWT	Sharon Magro crane@ewt.org.za	N/A

Newsletter	Mar 07. Multi-authored	– example attached	http://www.ewt.org.za/home.aspx	
TRAINING MATERIALS & RECORDING FORMS	Overview of GIS for Conservationists. Powerpoint presentation Raj Amin. (2006)		richard.pettifor@ioz.ac.uk	N/A
	Introduction to Relational Databases: Powerpoint presentation, Raj Amin (2006)		richard.pettifor@ioz.ac.uk	N/A
	Introduction to Population Dynamics. Powerpoint presentation, RAP (2006)	Document attached	richard.pettifor@ioz.ac.uk	N/A
	Overview of Population Viability Analyses – Uses & Abuses. Powerpoint presentation, RAP (2006)	Document attached	richard.pettifor@ioz.ac.uk	N/A
	Basic Excel Training Manual with Worksheets. RAP (2007)	Document attached	richard.pettifor@ioz.ac.uk	N/A
	Review of Darwin EE Training. Ed Farrell (March 2006)	Document attached	richard.pettifor@ioz.ac.uk	N/A
	Data Recording Forms			

PLEASE NOTE: THESE DATA ON PUBLICATIONS ABOVE ARE COLLECTED ANNUALLY (JAN – DEC); THEREFORE MORE RECENT PUBLICITY FROM JANUARY 2007 IS LACKING BUT WILL BE INCLUDED IN NEXT ANNUAL REPORT. HOWEVER, TRAINING MATERIAL ETC COVERS PERIOD OF REPORT (JUL 06 – MAR 07)

3.4 Progress towards the project purpose and outcomes

The project purpose is 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. Our indicators for achieving these objectives are 1) Improved information on the population dynamics and threats to the three crane species for effective management and implementation of crane conservation strategy; 2) Take up of recommendations by relevant SANBI programmes; and 3) Training courses completed in Environmental Awareness, and BTEC & BSc Hons projects also completed

After only 9 months in to the project, it is too early to assess whether we will achieve our overall project objectives. However, there is no reason to doubt that we will be able to run PVAs for each of the 3 species and that the elasticities will be the key component of the PVAs (for example, does conservation effort need to be concentrated on getting more juveniles into the adult non-breeding flocks, or concentrate on minimising mortality (e.g. concentrate on cutting powerline mortalities)?). The GIS component we are working on will also be essential for informing municipal, regional, and national strategies re zoning and habitat change – what buffer zone is essential for retaining wattled Cranes in their last stronghold in KZN, where pressure from large multi-nationals to carpet the veld with non-indigenous forestry is intense?). In other words, we will meet Objective 1. Objective 2 is clearly dependent on political will: we have no doubt that designated officers within DEAT and SANBI will take our results seriously (after all, the blue crane is a national emblem of South Africa and endemic to it), but action on the ground will depend on the balance of power within ministries and between ministers. Objective 3 will be achieved, although currently we cannot comment on whether we will achieve the

numbers that we hoped would be trained. However, 6 months into the project we have made excellent progress in educating the farming community (see 3.1, Environmental Education). However, difficulties in the group leading the “formal” aspects of EE mean that we will need to keep a close eye on the CLG achieving agreed targets, and if necessary shift EE to WESSA (discussed above). The assumptions around us achieving our objectives as given in our application included 1) Long term sustainability of SACWG within the EWT and the OCG and KZN CF; 2) Current support for crane conservation NGOs maintained within South Africa; 3) Governmental spatial data delivered on schedule; 4) South African government remains committed to the CBD and National Environmental Management: Biodiversity Act; 5) Accreditation on time; and 6) Students complete studies on time. Assumptions 1) through 4) seem to be holding, although until we explore the spatial data and actually start using it, we will not be able to assess its accuracy and fitness for purpose. 5) and 6) have been impacted in part by the national government decision to investigate the lottery, with negative knock-on effects on funding opportunities for the CLG. Allied with major staff changes (3 key people leaving/down-grading in the space of 9 months) is a cause for concern, but we believe we have alternative options if necessary (WESSA). The lack of any take-up of the bursaries is completely unexpected – however, three SACWG staff are now undertaking their MSc’s since the start of this project, and we have hopes that a fourth field worker will do so this year. These are new activities. Thus despite a range of unpredicted circumstances that have not always been conducive to us attaining our targets, we remain optimistic we will achieve our objectives.

3.5 Progress towards impact on biodiversity, sustainable use or equitable sharing of biodiversity benefits

Whilst written in as an activity towards Objective 1 above (ensure long term viability of cranes and their habitats through improved information on the population dynamics and threats to the three crane species), rather than as a primary objective itself, the development of the relational database and working on existing, historic data has demonstrated how important this activity will be to SACWG, and crane conservation. SACWG was formed in 1994, pulling together key work done by disparate conservationists across the country. Over ten years later, many of those data collected over this period at considerable expense and involving a large number of person hours in the field, are close to useless. A large amount of time is going to have to be dedicated to the retrieval and cleaning of these data. If nothing else, we at least now know that any data collected by SACWG into the future will be properly collated and curated. However, this is perhaps too pessimistic a picture, and a number of analyses and MSc theses have appeared recently looking explicitly at factors influencing the successful breeding or otherwise of the endangered Wattled Crane. Hopefully these crane specific data cleaned by students will be made available to us (as SACWG), and these can be married to updated and more accurate remotely sensed spatial data layers, which when coupled with fieldwork, may well reveal key parameters necessary for aiding the recovery of the species. Much of this work is likely to involve recommendations regarding the conservation (and rehabilitation) of grasslands and wetlands – homes to a number of endemic and threatened species. On another positive note, our risk-sensitivity maps should define clear buffers where forestry plantations should be excluded, and also pick up those powerlines where important mortality may be occurring. Eskom (the electricity provisioners) have shown themselves to be environmentally sensitive and responsible on these issues.

However, less easy to quantify will be our impact on actual conservation practice on the ground when economic circumstances dictate changes in agricultural practice or other zoning. No amount of EE can necessarily overcome a country’s need for food security, particularly in a water scarce country where the effects of climate change are predicted to be especially severe. However, two “branches” of DEAT (Cape Nature and Ezemvelo KZN Wildlife) are rolling out Stewardship programmes, which may just tip the balance in our (or the cranes) favour. We are in frequent contact with the key people undertaking this work, and they are amongst our host country partners.

4. Monitoring, evaluation and lessons

Our Stage 2 proposal had detailed Measurable Indicators and Means of Verification associated with each Output, as well as time-line specific Milestones. LT & I have used these measures for management purposes during the course of the year and at our review of progress at the workshop in March 2007. We believe we have provided sufficient detail and a robust framework for monitoring and evaluating our progress.

Monitoring our impact is a different kettle of fish, as this essentially depends on the political process, locally, nationally and globally. As conservation biologists, we can only seek to empower our host

country partners by working jointly to provide the most scientifically robust advice regarding conservation options. Clearly, the Environmental Awareness practiced by the SACWG/DI Fieldworkers (e.g. the frequent and often repeated interaction with farmers and their workers) and the more formal aspects of Environmental Education undertaken with the support of this Darwin project, both assist the conservation process. However, in a country where poverty alleviation remains top of the political agenda, we are heavily dependant on our host country partners finding the most suitable ways for achieving our project purpose. In this project, we have been fortunate in both having a wide base amongst host country partners, and our lead partner (Endangered Wildlife Trust) being held in high esteem by the relevant government agencies. It is therefore likely that this project will have significant impact both in terms of crane conservation, and also in terms of habitat conservation and the protection of essential ecosystem services.

5. Actions taken in response to previous reviews (if applicable)

N/A

6. Other comments on progress not covered elsewhere

As discussed in Section 2, we believe we have made good progress despite encountering difficulties regarding the employment of suitably trained staff. Three key decisions were made that we believe will not only ensure we remain on target to achieve our objectives, but two of these add significantly to our proposal, namely the use of 20 satellite transmitters on blue cranes from two key geographic areas, and the development of fixed census routes in each of the six key crane areas in South Africa – these latter have been designed to be representative of the habitats in each area (determined from GIS Landcover maps), and will thus allow the accurate plotting of habitat change alongside indices of crane numbers well into the future.

7. Sustainability & Dissemination

See Table 2 above regarding Dissemination and Promotion of work. As also indicated in 3 above, SACWG/DI staff were in contact with over 600 land-owners, farm-workers and rural communities. This informal environmental awareness work is seen as a key element of SACWG's work, and as such will be built into the Business Plan for Year 2. We are therefore confident this work will continue at the end of the Darwin project. In terms of project outputs, outcomes and impacts, these will be assessed closer to the point of delivery (ie Year 3), but we have already covered their dissemination and the targeting of relevant policy makers in our original proposal.

8. Dissemination

See 7 above

9. .

10. **OPTIONAL: Outstanding achievements of your project during the reporting period (300-400 words maximum). This section may be used for publicity purposes I agree for ECTF and the Darwin Secretariat to publish the content of this section**

Annex 1 Report of progress and achievements against Logical Framework for Financial Year: 2006/07

Project summary	Measurable Indicators	Progress and Achievements April 2006 - March 2007	Actions required/planned for next period
<p>Goal: <i>To draw on expertise relevant to biodiversity from within the United Kingdom to work with local partners in countries rich in biodiversity but constrained in resources to achieve</i></p> <p><i>The conservation of biological diversity,</i></p> <p><i>The sustainable use of its components, and</i></p> <p><i>The fair and equitable sharing of the benefits arising out of the utilisation of genetic resources</i></p>		<p>Building capacity at local level for effective data collection and curation, plus analysis, to be used in dissemination to relevant governmental depts, ranging from local to national level.</p> <p>Expansion of environmental education and collaboration with national Working for Wetlands, that includes wetland rehabilitation and poverty alleviation.</p>	
<p>Purpose 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</p>	<ul style="list-style-type: none"> Improved information on the population dynamics and threats to the three crane species for effective management and implementation of crane conservation strategy. Take up of recommendations by relevant SANBI programmes. Training courses completed in Environmental Awareness. BTEC & BSc Hons projects completed 	<p>Providing relational database for all SACWG data: a platform for data collation and curation well into future;</p> <p>Expanding collection of relevant data</p> <p>Enabling GIS expertise within SACWG and hence EWT: essential for effective conservation planning</p> <p>Providing analytic training and enhancing environmental education</p>	<p>Population of relational database</p> <p>Analysis of data</p> <p>Initial creation of PVA models</p> <p>Preliminary risk sensitivity mapping</p> <p>Satellite tracking of cranes</p> <p>Extend collaboration with SANBI & DEAT</p> <p>Extend Environmental Education and assist in completion of Higher Education courses</p>
<p>Output 1. Management recommendations from PHVA models & sensitivity maps for all 3 crane species in South Africa (YEAR 3 OUTPUT)</p>	<ul style="list-style-type: none"> Land cover & wetland inventory maps consolidated by end Yr 1 	<p>Spatial data essential for building up of Risk sensitivity maps</p> <p>Targeted collection of breeding parameters essential for PVAs</p> <p>Design and implementation of relational database essential platform for current data collection and analysis and curation well into future</p>	
<p>Activity 1.1) Employment of additional field workers; 1.2) Demographic & habitat data collected on all 3 species across eastern grasslands, western Cape & Karoo, using standardised protocols, aerial surveys</p>		<p>1.1 Completed to plan with modification</p> <p>1.2 Completed bar attachment of Cellular (NOT radio) transmitters – in hand</p>	

<p>and radio-transmitters; 1.3) Ground truthing of relevant wetland inventory sites; 1.4) Cleaning of existing data; 1.5) Setting up of EWT GIS Unit; 1.6) Construction of relational spatial database; 1.7) Sourcing and processing of GIS data layers; 1.8) Collation of Yr 1 field data, incorporation into national db & initial statistical analyses.</p>		<p>1.3 Ongoing 1.4 Ongoing 1.5 Completed, but 7 months late in appointment 1.6 Completed 1.7 Completed 1.8 Ongoing. General: Problems with employing both a suitable GIS candidate and fieldworkers could have been potentially very costly. However, regarding fieldwork, we were able to provide additional fuel costs to SACWG & reprioritise their data collection, & thus ensuring adequate data collection during this past breeding season. We have been successful too in finally employing an excellent GIS person, & we are reasonably confident (depending on accuracy of spatial layers) of remaining on target. Year 2: We will be carrying out both risk-sensitivity mapping and PVA work effectively a year earlier than planned – these activities will highlight any major problems in the data at a much earlier date. The attachment of 20 satellite transmitters to Blue Cranes in two “sub-populations” will yield unparalleled data and will be a major publicity coup.</p>
<p>Output 2. Information for inclusion in bioregional plans and statutory processes around threatened and protected species and ecosystems</p>	<p>None in Year 1</p>	<p>N/A</p>
<p>Activity 2.1. N/A</p>		
<p>Output 3. Forward Strategy for National Crane Conservation 2009 - 2013</p>	<p>None in Year 1</p>	<p>N/A</p>
<p>Activity 3.1. N/A</p>		
<p>Output 4. Collaborative partnership with Working for Wetlands Programme</p>	<p>Prioritisation of important crane wetlands to feed into planning processes of Working for Wetlands Programme from Yr 1 Involvement in Working for Wetlands rehabilitation planning teams from Yr 1 Ground truthing of relevant wetland inventory sites by end of Yr 1 Initiation of Working for Wetlands projects at important crane sites</p>	<p>These are all important indicators, not just of collaboration between Working for Wetlands and SACWG, but also key in terms of South Africa meeting its CBD commitments (wetland inventory). The rehabilitation of wetlands will be important on a number of fronts, including increasing habitat suitability for crane breeding (especially the Endangered wattled crane) and poverty alleviation. Currently we have concentrated on ground-truthing of wetlands – more effort needs to be given in the remaining months of Year 1 & into Year 2 of drawing up quantitative criteria for prioritising wetland rehabilitation.</p>

	including rehabilitation and poverty alleviation from Yr 1	
Activity 4.1. Priority crane wetland assessment (Working for Wetlands) – given as activity in Year 3 in Log frame. Initiation of Working for Wetlands projects at important crane sites including rehabilitation and poverty alleviation Ground-truthing of remote sensed wetlands		Activities undertaken, but as indicated above, increased priority to be given to wetland rehabilitation relevant to crane conservation.
Output 5. Capacity in advocacy and lobbying techniques	7 SACWG field staff & 25 associated EWT WG staff trained by end Yr 1	This will be an EWT-wide training commitment – discussions in progress for external training to be provided for all EWT employees.
Activity 5.1. Undertake training		External consultants to be used – planned for 2007
Output 6. South African capacity in data analysis including statistical methods and spatial analysis, GIS database management	Fully operational National crane database and manual by yr 1 ● 30 SACWG and other field staff & associated EWT WG staff trained by end of Yr 1	The crane relational database is now completed and has been beta-tested. This is a major achievement, as it now means that all of SACWG's current & future activities will be stored in an accessible, cleaned format. Training going to plan: overviews of population dynamics, PVAs, relational databases & GIS attended by 30 EWT staff. Intensive Excel course attended by 7 SACWG/DI staff & 1 CLG extension worker.
Activity 6.1. Create relational database and appropriate Excel worksheets 6.2 Seamlessly transfer data between PDAs/Excel and Access 6.3 Training in Population Dynamics, PVAs, Relational Databases, GIS, Excel and Statistical Analyses		Worksheet and database design implemented & tested. Training on course, with further week long sessions planned on 07/08 for using GIS and PVA software. It was brought to the attention of EWT Working Group Managers & Directors that time and money needed to be provided for EWT employees to attend these training workshops – unfortunately, take-up outside of SACWG/DI staff is low.
Output 7. African regional capacity built in GIS and spatial analysis including basic statistical analysis	3-5 AWAC staff trained by yr 1	Not carried out. Indicator appropriate – financial constraints limiting opportunities. LT & RAP in discussion with Kerryn Morrison, Africa representative of International Crane Foundation.
Activity 7.1. Range state training		Not carried out – seeking funding to enable attendance by relevant range state biologists
Output 8. Fully functional GIS unit for management of crane and associated endemics and habitat within EWT	GIS unit set up and operational; staff appointed and fully trained by end of Yr 1	GIS person employed in Feb 07, seven months later than planned. However, a concerted effort to collect, collate and process as many spatial data layers as possible following her appointment and the extended visit by Raj Amin makes it likely that we remain on target for these outputs.
Activity 8.1. Employ GIS person 8.2 Collect & collate spatial data & begin GIS processing		See above & comments Activity 1
Output 9 Three annual standardised status reports for the 3 crane species	Template produced by end Yr 1, workshops undertaken, status reports generated and being used for management decision making Yrs 1-3	Decided not to produce report template since SACWG fieldworkers were already producing monthly reports along agreed format. Will be reviewed in 2007.
Activity 9.1. Monthly reports from fieldworkers following standardised format 9.2. Synthesis into Annual Report		Completed Completed

Output 10 Financial forward strategy for crane conservation	Strategy commissioned (Yr 2) and implemented within Yr 3	For implementation in 2007 – In hand
Activity 10.1. Sharon Magro to review & update SACWG Business Plan		See above
Output 11 Expanded and enhanced community environment education programme	<ul style="list-style-type: none"> • Minimum of 800 school teachers and 300 community leaders trained and supported per year in accredited EE • 10 Environmental Awareness Officers trained per year 	<p>This was mis-presented in Project application (and under Outputs (Section 21) of original Project application we specify that these represented total numbers trained by EWT: the DI component was to be 3 Environmental Awareness Officers trained , alongside 200 teachers and 100 Community leaders in Environmental Education skills.</p> <p>We are NOT on course to deliver on these target numbers, in large part owing to difficulties experienced by the Conservation Leadership Group, to which we had delegated this work. Some progress was, however, made. Areas of difficulty included formal teacher and community leader training. Following departmental restructuring, we are likely to train 150 teachers and 50 community leaders. We will be reviewing the Environmental Education with the new CLG appointee, Ms Janet Snow, along with the four key Extension workers (Samson Phakathi (coordinator), Steven Segang, Mpinda Radebe, Peter Masilela, Bongisiwe Khoza)</p>
Activity 11.1. Training of teachers & community leaders 11.2 Training of Environmental Awareness Officers 11.3 Contact with land-holders, farmers & workers		11.1 Approximately a 150 teachers and 50 community leaders will be trained in a year 11.2 Three EAOs are undergoing yearlong learnership certificate training in Environmental Education 11.3. Large numbers of farmers and labourers reached by SACWG/DI field workers, averaging 10 farms and associated farmers per week.
Output 12 Publications & Publicity	EE material produced and used in schools by end Yr 1, community education and land owner awareness material produced by end Yr 1	SACWG has a store of educational leaflets which are still being used. We have discussed redesigning and extending publicity material, but this option has not seemed a priority. Will be reconsidered during 2007 in consultation with CLG. These measurable indicators exclude the “press work” done by SACWG and ZSL, which should be included (Scientific papers are covered under submission in Year 3)
Activity 12.1. EE material produced 12.2 Public awareness material produced such as publicity to newspapers, radio & TV etc.		12.1 EE material not produced (see above) 12.2 See Table 2 above

Annex 2 Project's full current logframe

Project summary	Measurable Indicators	Means of verification	Important Assumptions
<p>Goal:</p> <p>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 the conservation of biological diversity, the sustainable use of its components, and the fair and equitable sharing of benefits arising out of the utilisation of genetic resources</p>			
<p>Purpose</p> <ul style="list-style-type: none"> • 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 	<ul style="list-style-type: none"> • Improved information on the population dynamics and threats to the three crane species for effective management and implementation of crane conservation strategy. • Take up of recommendations by relevant SANBI programmes. • Training courses completed in Environmental Awareness. BTEC & BSc Hons projects completed 	<ul style="list-style-type: none"> • Detailed crane sensitivity maps, PHVAs, status reports and recommendations for population and habitat management across 3 species and related populations • Annual review and feedback reports from SACWG participants and partners including provincial conservation authorities • Accredited certificates in EA course completion • Completion of post-graduate studies 	<ul style="list-style-type: none"> • Long term sustainability of SACWG within the EWT and the OCG and KZN CF • Current support for crane conservation NGOs maintained within South Africa • Governmental spatial data delivered on schedule • South African government remains committed to the CBD and National Environmental Management: Biodiversity Act • Accreditation on time • Students complete studies on time
<p>Outputs</p> <ul style="list-style-type: none"> • Management recommendations from PHVA models & sensitivity maps for all 3 crane species in South Africa <ul style="list-style-type: none"> • Information for inclusion in bioregional plans and statutory processes around threatened and protected species and ecosystems 	<ul style="list-style-type: none"> • Land cover & wetland inventory maps consolidated by end Yr 1 • Crane distribution, breeding and non-breeding sites, environmental variables and threats (e.g. powerlines) superimposed on maps by end Yr 2. • Crane demographic parameters extracted from statistical models Yr 2 • PHVA models and sensitivity maps produced for each of the 3 crane species by the end of Yr 2 • Management recommendations stemming from PVA and sensitivity maps by end of Yr 3 • Advocacy of conservation strategy to relevant lead agencies by end of Yr 3 • Contribution to the 	<ul style="list-style-type: none"> • PHVA and sensitivity map reports • Management reports <ul style="list-style-type: none"> • Presentation of recommendations • Participation in workshops and stakeholder forums 	<ul style="list-style-type: none"> • Delivery of national georeferenced data on schedule • Relevant data available for PHVA analyses <ul style="list-style-type: none"> • Recommendations taken into consideration in policy and legislation. • Processes will have started within relevant time frame

<ul style="list-style-type: none"> ● Forward Strategy for National Crane Conservation 2009 - 2013 ● Collaborative partnership with Working for Wetlands Programme ● Capacity in advocacy and lobbying techniques ● South African capacity in data analysis including statistical methods and spatial analysis, GIS database management ● African regional capacity built in GIS and spatial analysis including basic statistical analysis ● Fully functional GIS unit for management of crane and associated endemics and habitat within EWT ● Three annual standardised status reports for the 3 crane species 	<p>design of SANBI National Grassland Biodiversity Programme by end Yr 3</p> <ul style="list-style-type: none"> ● Workshop undertaken, National Plan produced by end of Yr 3 ● Prioritisation of important crane wetlands to feed into planning processes of Working for Wetlands Programme from Yr 1 ● Involvement in Working for Wetlands rehabilitation planning teams from Yr 1 ● Ground truthing of relevant wetland inventory sites by end of Yr 1 ● Initiation of Working for Wetlands projects at important crane sites including rehabilitation and poverty alleviation from Yr 1 ● 7 SACWG field staff & 25 associated EWT WG staff trained by end Yr 1 ● Fully operational National crane database and manual by yr 1 ● 30 SACWG and other field staff & associated EWT WG staff trained by end of Yr 1 ● 3-5 AWAC staff trained by yr 1 ● GIS unit set up and operational; staff appointed and fully trained by end of Yr 1 ● Template produced by end Yr 1, workshops undertaken, status reports generated and being used for management decision 	<ul style="list-style-type: none"> ● Documentation and Presentation ● List of key wetlands to be included in planning ● Rehabilitation plans ● Populated wetland inventory database ● Monthly project progress reports ● Numbers of staff trained ● Crane monitoring data in database ● Numbers of staff trained ● Number of status reports ● Number of staff trained ● Number and quality of sensitivity maps and status reports ● Number and content of reports 	<ul style="list-style-type: none"> ● Participation and support of all relevant organisations ● Government funding for Working for Wetlands Programme continues ● Staff retained in present or higher positions ● Staff retained in present or higher position ● Continued support from International Crane Foundation – Africa Region ● Capacity for optimum use of unit and on-going EWT support ● Relevant information available
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<ul style="list-style-type: none"> • Financial forward strategy for crane conservation • Expanded and enhanced community environment education programme • Publications & Publicity 	<p>making Yrs 1-3</p> <ul style="list-style-type: none"> • Strategy commissioned (Yr 2) and implemented within Yr 3 • Minimum of 800 school teachers and 300 community leaders trained and supported per year in accredited EE • 10 Environmental Awareness Officers trained per year • Community education and land owner programme enhanced by yr 3 • 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 	<ul style="list-style-type: none"> • Report provided to SACWC • Number of trained teachers & leaders • Progress reports • Number of papers submitted; publicity material sent to Darwin Initiative 	<ul style="list-style-type: none"> • Suitable donors available • Teachers have continued interest in EE training • EE accreditation on time • EE material being taken up by target groups
<p>Activities Data Collection, Collation and Analysis</p>	<p>Activity Milestones <u>Year 1:</u> 1) Employment of additional field workers; 2) Demographic & habitat data collected on all 3 species across eastern grasslands, western Cape & 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 & initial statistical analyses. <u>Year 2:</u> 1) Demographic & habitat data collected on all 3 species across eastern grasslands, western Cape & 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 & detailed statistical analyses; 5) Construction of PHVA models for all 3 spp., including population sub-structure: initial runs. <u>Year 3:</u> 1) Refinement of sensitivity maps & production of final maps; 2) Final statistical analyses of demographic & habitat data. Also CMR analyses of ringing & sighting data to obtain robust survival estimates; 3) Update and final run of PHVA models</p>	<p>Assumptions</p> <ul style="list-style-type: none"> • Able to employ suitably qualified field workers & GIS staff • Farmers/land-owners allow field workers to carry out necessary observations • National geo-referenced data delivered on schedule 	

<p>Environmental Awareness</p> <p>Training</p>	<p>1) Day-to-day contact of farmers & workers by field staff; 2) Accredited EE in urban & rural areas; 3) Conservation Leadership Group training of teachers in EE.</p> <p>1) Training in spreadsheet, relational database, statistics, & GIS and spatial analysis at entry, intermediate and advanced levels; 2) Training in fieldwork & 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 & 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 & Community Leaders in EE</p>	<p>Local support for Conservation Leadership Group (EWT) continues.</p> <p>Local support for EWT Working Groups continues</p>
<p>Management Recommendations and Action</p>	<p><u>Year 3:</u> 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 & 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"> ● Dept of Environmental Affairs & Tourism remains committed to CBD & continues financing National Grasslands Biodiversity Programme, National Spatial Biodiversity Assessment & Working for Wetlands. ● Bio-regional planning & Stewardship continues under National Biodiversity Act
<p>Reporting</p>	<p><u>Year 1:</u> 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.</p> <p><u>Year 2:</u> 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.</p> <p><u>Year 3:</u> 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 & Environmental Awareness programme progress reports</p>	<p>Project implementation timetable is kept to.</p>

Annex 3 onwards – supplementary material (optional)

Included as attachments with this e-mail, namely

15-002-Report1	This Report
15-002-Report2	CLG Report to RAP & LT re agreed Darwin EE
15-002-Report3	Database Table Structure: data model
15-002-Report3a	Worksheets for fieldworkers
15-002-Report4	SACWG Annual Report
15-002-Report5	Excel Training manual
15-002-Report6	Correspondence between RAP & Margaret Okot re Viring of Funds
15-002-Report7	<i>Grus</i> example
15-002-Report8	Training lecture: Overview of Population Dynamics
15-002-Report9	Training lecture: Overview of Population Viability Analyses – their Uses and Abuses

Checklist for submission

	Check
Is the report less than 5MB? If so, please email to Darwin-Projects@ectf-ed.org.uk putting the project number in the Subject line.	
Is your report more than 5MB? If so, please advise Darwin-Projects@ectf-ed.org.uk that the report will be send by post on CD, putting the project number in the Subject line.	YES – but will be sent as e-mail with 9 attachments plus this report - see below
Do you have hard copies of material you want to submit with the report? If so, please make this clear in the covering email and ensure all material is marked with the project number.	
Have you completed the Project Expenditure table?	
Do not include claim forms or communications for Defra with this report.	

NOTE: there will be 9 (NINE) attachments with this Report (itself an attachment, namely 15-002-Report1.doc), each with the following respective title:

TITLE	CONTENT
15-002-Report2	CLG Report to RAP & LT re agreed Darwin EE
15-002-Report3	Database Table Structure: data model
15-002-Report3a	Worksheets for fieldworkers
15-002-Report4	SACWG Annual Report
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