Darwin Initiative Annual Report

Important note:
To be completed with reference to the Reporting Guidance Notes for Project Leaders – it is expected that this report will be about 10 pages in length, excluding annexes
Submission deadline 30 April 2009

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
Host country Partner Institution(s)	N/A
Other Partner Institution(s)	Endangered Wildlife Trust - Crane Conservation (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 April 2008 – 31 March 2009 Annual Report #3
Project Leader Name	Richard A PETTIFOR
Project website	N/A
Author(s) and main contributors, date	RA Pettifor, K Morrison (Manager, EWT-CC), S Phakathi (Co-ordinator – Rural eco warriors (REWS), EWT-CLG), K Oliver (EWT-CC GIS & Database Manager) 14 May 2009

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

Our official host country partner on this proposal was the South African Crane Working Group (SACWG) of the Endangered Wildlife Trust (EWT), South Africa. As of 1 March 2009, this became reconstituted as the EWT/ICF-CC: EWT/International Crane Foundation – Crane Conservation. Effectively this leaves South African Crane Conservation pretty much as it was under SACWG, but prevents duplication of effort north and south of the SA border (the EWT/ICF partnership always had responsibility north of the border), and it enhanced the synergy of the whole "crane group". This restructuring led to the post of Manager of SACWG being made redundant, and effectively since December 2008 I have been dealing either directly with "SACWG" staff or through Kerryn Morrison, as appropriate. Both Kerryn & I had to carry additional administrative and managerial responsibilities over the course of this reporting period, but the formation of the EWT-CC was agreed at the February 2009 workshop with alacrity by everyone present, and I believe we are on target to achieve all our targets (and more), although the business plan has not acquired the detail or integration that I was hoping for. However, I believe this will be rectified.

Within EWT, active participation alongside a number of working groups is particularly strong, especially with the Wildlife Energy Interaction Group (WEIG). WEIG too has a dynamic new manager, and working with CC staff, are getting a quantitative grip on the impact of powerlines on crane and other large bird mortality. EWT has created a grassland group that interacts extensively with us (Andre Rossouw, the mananger, used to work extensively on Wattled Cranes in KZN for EWT-SACWG). Externally, our other key partners have remained our relationships with "Working for Wetlands" (SANBI) and certain provincial conservation agencies, especially Ezemvelo KZN Wildlife and Cape Nature (Western Cape Nature Conservation Board). The key drivers and contacts in our work with the above were respectively John Dini, Kevin McCann and Kevin Shaw. Working for Wetlands has played a key role in rehabilitating wetlands, whilst the two Kevins (and their colleagues) have been instrumental in pushing through "Stewardship Schemes" as allowed under SA conservation legislation.

The other provincial conservation agencies have all played a role in our work too (eg Kobus Pienaar keeping an eye on the 20 – 30 odd pairs of Blue Cranes in Limpopo Province and Maryna Matthee keeping her ears to the ground re all three species in Mpumalanga). We have also retained contact with the Avian Demographic Unit – now the Animal Demographic Unit under Prof Les Underhill (University of Cape Town) and various ecologists from a wide range of bodies, but especially relevant groupings within SANBI (South African Biodiversity Institute).

The five EWT-CC field officers (FOs) are widely dispersed across South Africa's crane "hotspots". Management of this group was not effective under the previous SACWG manager, but effectively this led to the FOs taking responsibility for their own work or seeking guidance from Kerryn or myself. The fact that FOs needed to electronically pass their Field Forms on to Kirsten Oliver for integration into the crane database meant that Kirsten provided additional support and guidance to the FOs.

Three Darwin Workshops (July, October, February) each of roughly two weeks duration were held this financial year (see below), as well as a two week trip undertaken by RAP with a "SACWG" FO (Glenn Ramke) through the country which allowed me to spend a couple or more days with key FOs in areas with which I was not familiar – this was an important learning experience both for myself and I suspect the field staff.

A number of conferences were attended by SACWG/CC staff where presentations were given and contacts maintained (see Table below)

Conference	Presentation
Biodiversity Planning Forum 2008	Poster: *Cranes and Diversity* (Kirsten Oliver)
Pan-African Ornithological Congress	1. *The importance of the Western Cape population of Blue Cranes (Anthropoides paradiseus) to the global population in the face of climate change: Implications for conservation* (Presented by Helen Prinsloo) 2. *Environmental determinants of continued breeding attempts by Wattled Cranes (Bugeranus carunculatus) in KwaZulu-Natal: Implications for conservation.* (Presented by Andre Rossouw) 3. Poster: *Records of mortalities in Blue Cranes (Anthropoides paradiseus) in the Karoo from 2005 to 2008* (Bradley Gibbons 4. *Bioacoustic gender determination of the Blue Crane (Anthropoides paradiseus*). (Ursula Franke)
Grassland Society of Southern Africa Congress	*Integrating Crane Conservation with Sustainable Habitat Utilization* (Kirsten Oliver)
National Wetlands Indaba	1. *Environmental determinants of continued breeding attempts by Wattled Cranes (Bugeranus carunculatus) in KwaZulu-Natal: Implications for conservation* (Presented by Tanya Smith) 2. *The use of Ecological Niche Modelling to assess the potential response of Wattled Crane populations to geographic changes in landscape and the environment* (Kirsten Oliver)
Biodiversity Information Management Forum 2008	Workshop
Biodiversity Planning Forum 2009	*Ecological Niche Modeling for Integrated Wattled Crane Conservation* (Kirsten Oliver)
Darwin Initiative East African Regional Workshop, Arusha	*Networking & learning*
Northern Cape Biodiversity Symposium	*Karoo Crane Conservation Project* (Bradley Gibbons)

In addition, we retain frequent contact with Working for Water (removal of exotics, often facilitated through our Field Officers) and the SANBI Grasslands project. We maintain strong and formal links with the “Wattled Crane Recovery Programme” led by Johannesburg Zoo.

However, Kerryn and I both felt that we needed to formalize our arrangements with our partners – we could go and GPS a wetland for Working for Wetlands (W4W), thus helping them in defining and ground-truthing their Wetland Inventory. By the same token, we could request that Wetland X was rehabilitated with some urgency. Whilst such data and requests were made by e-mail, and maybe followed up in conversation, we felt this to be a rather hit or miss affair. Kerryn and I visited John Dini in December 2008, and he agreed that formal structures should be put in place to ensure data and requests did not “get lost”. EWT-CC is in the process of drawing up a generic MOU type document that can then be modified or appended as necessary for each partner. The principle value of this is not simply in agreeing where data are shared etc, but more importantly, ensuring a formal system exists for the transfer of data and requests between organizations that are captured and structures put in place to ensure they are followed up.

Other linkages: Our Population Viability Modelling was taken forward in part by Dr Carmen Bessa Gomes. We made use of software (ULM: Unified Life Models) that allows greater

flexibility in model structure than do “off-the-shelf” packages. Another linkage this year has been with Ms Katerina Wojtaszekova, an MSc student with Leeds University. She spent six months in the field, and has spent the remainder of her time working with me at ZSL. This has been a very fruitful collaboration, and resulted in her obtaining an MSc *cum laude* on both thesis and course work. The details of this work are given below. Kirsten Oliver, our db and GIS manager employed under the Darwin project has been working with GBIF (Global Biodiversity Information Facility) in her spare time, and has run a number of courses on Ecological Niche Modelling which have been well received (and the results useful for ourselves!)

Other staff changes: It is with regret that that Sinegugu Zukulu has decided to move on from his post as manager of the Conservation Leadership Group (CLG), but fortunate that Samson Phakathi is now leading the Rural EcoWarriors (REWS). Samson has many years experience working with wetlands and communities (as well as other REWS), and hopefully he will work together with Osiman Mabachi, who has moved from trying to work on cranes whilst based in Zimbabwe to the Johannesburg office. He will be taking community based projects forward both in South Africa and East Africa, and hopefully Zambia too. Ursula Franke joined us as well this year as a Field Officer in the Mpumalanga area – she is completing her MSc thesis on acoustic signalling in Blue Cranes.

3. Project progress

This is taken from Section 1, and highlights both Project Activities and Outputs
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.

3.1 Progress in carrying out project activities

a) **framework for ongoing data collection using a common model that identifies future data requirements, reporting & management needs;** The original teething problems of these “Field Worker Sheets” have been resolved, and Kirsten Oliver is generally happy with the standard to which the electronic data are filled in. Occasional reminders regarding protocol serve the purpose of preventing “bad habits” creeping in!
b) collection of new data relevant to crane conservation and habitat management; Where relevant, new data and protocols have proceeded smoothly. One exception is the use of “Fixed Route” censuses, where FOs were “ideally” meant to drive three 60km routes every two months, recording both habitat change (against National Land Cover baseline) and count all large terrestrial birds (ie similar in practice to the ADU’s CAR counts, but at more frequent intervals). Despite 9 months of debate via e-mail and at workshops, an agreed protocol

applicable to *all* FOs has yet to be agreed. This largely reflects a cost-benefit ratio that varies with geographical region – "grassland birds" (3 FOs in Mpumalanga and KZN) are difficult to pick up, whilst habitat change necessitates wide-ranging routes that are probably not cost effective either from the perspective of fuel or the FO's time. On the other hand, FO's in the northern E Cape, the Karoo, and the W Cape report on these fixed routes being extremely efficient, both in terms of monitoring habitat change and in counting birds. We are currently revising the "Fixed Route" sampling so that the FO is likely to have an area-specific protocol.

c) training in data collection and analysis, especially spatial; Following the original intensive training given by Raj Amin in preceding years, we have generally tried to build in ArcGIS work into the workshops, with Kirsten Oliver overseeing queries. I have done little specific statistical training as my experience in training in Excel indicated that regular and *repeated* training was needed for the training to be effective. As the most sensible route to go down was training in "R", I have left this component out except in passing (eg regressions etc). Kerryn Morrison & I identified the need for EWT-CC to employ a F/T statistician to oversee the crane work and explicitly carry out CMR models, GLMMs and have familiarity with "R". EWT management now sees the need for such a post to cover all their working groups, and thus training in R is part of their wider strategic thinking. Finally, just a note that whilst all the "SACWG" staff understood the need to collect eg samples of clutch-size for the PVA models, the fact that the FOs have been trained in ULM and PVAs in general means that each FO is much more motivated in the collection of data, and despite repeated explanations of the importance of variance in my early training, they now see the importance of collecting large samples in order to estimate both means and associated standard deviations.

d) development of & training in crane-specific, spatial population models; A multi-author paper on Blue Crane PVAs in relation to climate change was presented at the Pan African Ornithological Congress (PAOC) (see attachment). Training was provided in both Vortex and ULM for a 3 "sub-population" model

e) **development of & training in relevant educational and community awareness material**; See Attachment Samson 1

f) production of integrative forward strategy and sustainable business plan; Following initial discussions with "SACWG" in September 2008, RAP drafted a Forward Strategy that Kerryn Morrison and Jim Harris (ICF) commented on. This was presented to EWT-CC and a small audience (eg W4Wetl; WWF SA, E KZN W; Cape Nature) familiar with EWT and SACWG – critical comments were invited from both those who will be implementing the Strategy (EWT-CC) and those external partners most closely involved in crane and habitat conservation. Mote than a full week was spent on this process during the workshop, and Kerryn Morrison has incorporated the resultant comments. RAP needs to add certain sections before it is sent out for review. It will be launched in July 2009. Work on the sustainable business plan is not yet at the stage which we wished, in part because a previous manager did not take this work forward over the recent critical 12 months. Debbie Thiart's time (she is office manager with responsibility for ensuring existing contracts are fulfilled) has been fire-fighting and unable to devote much time to this activity. However, having Kerryn Morrison, working in the international arena (she is part-employed by the International Crane Foundation), and all EWT-CC staff, but especially Kirsten Oliver alongside Kerryn operating at the national level, should assist in new grant sources becoming available

g) **production of PHVA models, crane sensitivity maps and risk assessments;** Completed – see sections below

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. Of particular importance here is the "formal" collaboration especially with Working for Wetlands and the SANBI Grassland Programme, as well as our close linkage with the provincial conservation bodies that are mandated to deliver stewardship by 2013. "Stewardship" and delivery of key sites to Working for Wetlands will be our two biggest contributions to the CBD (see Final Report). Kevin McCann (E KZN W) & Kevin Shaw (Cape Nature) have agreed to sit on a reconstituted Crane Consultative Group, that will also include Richard Beillfuss (International Crane Foundation) and probably myself, alongside Kerryn Morrison as Manager of the African Crane group within EWT.

3.2 Progress towards Project Outputs

These Project Outputs are taken from Section 1 above, which in turn was taken from the original proposal.

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; This output has been achieved through a series of workshops, starting when the project began. This past year has concentrated mainly on the re-inforcement of techniques learnt in the preceding two years, with the explicit intention of getting FOs to explore questions pertinent to their own areas and which made use of what they had previously learned in population dynamics (including Vortex and ULM), Excel and ArcGIS. Costs have prevented other African range states being involved in this training, but the relocation of Osiman to EWT HQ should help in the training in the longer term (a Darwin proposal partly based on crane work in East Africa is planned for 2010).

2) **involve custodians of crane habitat**, both large scale farmers and disadvantaged people, in conservation through extensive community based educational schemes; Information relevant here is given in Attachment “REWS08”, and will be overviewed in the Final Report.

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. Kirsten Oliver, employed on Darwin funding, has finally entered virtually all the bits and pieces of data into a single relational database. Given that she was working largely on her own with minimal management, this is a major achievement. Further, we employed her largely for her GIS experience (not database skills), and so the future looks extremely positive and Kirsten is already running Ecological Niche Models on these data. The importance of this achievement cannot be over-emphasised: not only can we access the data through simple queries (see brief summary table below) and answer questions such as the median dispersal distance of e.g. Blue Cranes, but we have now reached agreement with Mark Andersson and Kevin Shaw that their ringing data (roughly 1000 individuals in total) will be added to this data base. In other words, EWT-CC will become the central *national* repository of crane information in South Africa. This key achievement is not only critical to EWT-CC, but serves to illustrate to all EWT groups the importance of properly curated data. We have all learned a lot as how to design forms that are relevant to Field Officers but also suitable for reading into the relational database (this will become automated). Furthermore, this database helped us considerably in our thinking regarding the Forward Strategy.

Some Crane Statistics as at 15/05/2009 from Relational Database (unique numbers)					
Breeding Sites = 1966					
Blue Crane = 594		Wattled Crane = 664		Grey Crowned Crane = 707	
MP	109	MP	63	MP	46
KZN	82	KZN	587	KZN	417
EC	64	EC	8	EC	242
NC	139	NC	0	NC	0
WC	187	WC	0	WC	0
LP	3	LP	0	LP	0
FS	9	FS	6	FS	2
Ringing = 1266 (*Note excludes data from M Andersson & K Shaw)					
Blue Crane = 1014		Wattled Crane = 116		Grey Crowned Crane = 108	
MP	47	MP	23	MP	10
KZN	31	KZN	85	KZN	45
EC	43	EC	2	EC	51
NC	265	NC	0	NC	0
WC	596	WC	0	WC	0
LP	14	LP	0	LP	0
FS	17	FS	3	FS	2
Resightings = 986 *(as above)					
Blue Crane = 350		Wattled Crane = 128		Grey Crowned Crane = 46	
MP	22	MP	128	MP	3
KZN	3	KZN	20	KZN	18
EC	24	EC	106	EC	25
NC	37	NC	0	NC	0
WC	260	WC	0	WC	0
LP	1	LP	0	LP	0
FS	3	FS	2	FS	0
Sightings = 22 715					
Blue Crane = 8097		Wattled Crane = 5535		Grey Crowned Crane = 9041	
MP	971	MP	308	MP	1148
KZN	2513	KZN	4535	KZN	4976
EC	1825	EC	247	EC	1887
NC	1357	NC	3	NC	3
WC	474	WC	3	WC	6
LP	0	LP	0	LP	0
FS	512	FS	166	FS	493

3.3 Standard Measures

Table 1 Project Standard Output Measures

Code No.	Description	Year 1 Total	Year 2 Total	Year 3 Total	Total to date	Number planned for this reporting period	Total planned from application
2	MSc training by research	2	1 completed 1 underway	1 completed 1 underway	To be completed in Final Report – project completion in 3 months	0	0
3	10 South African Environmental Awareness Officers trained (3 from DI funds)	0 (lack of lottery funding)	3	2 obtained NQF Level 5	Ditto	See report below	3 (10)
3	800 Teachers & 300 Community Leaders (South Africans) trained in Environmental Education skills (**200** & **100** respectively from DI funds)	153 and 31	279 & 218	467 & 28 teachers (5595 students reached)	Ditto	See report plus awards	600 & 300
4A	3 (South African)	1	0	1	Ditto	2	3
4B	8	6	6	6	Ditto	8	8
4C	2 (South African)	3 (2 SA)	4 (2 SA)	3	Ditto	1	2
4D	16	12	10	12	Ditto	16	16
6A	1 South African db & GIS technician trained	1	1	1	Ditto	1	1
6B	3 wks intensive plus regular e-mail contact	3	8 (3 SA)		Ditto	3	3
6A	2 South African Fieldworkers trained (incorrectly entered)	Incorrect in 07 rpt. Correct # = 10	12		Ditto	2	2 (incorrectly entered)
6B	3 wks intensive plus regular	3	6	8	Ditto	3	3

	e-mail contact						
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	Variable, ranging from 8 core – 30. None from range states bar Osiman who has moved from Zimbabwe to SA	Ditto	25-30 Fieldworkers & Managers from SA trained in intermediate spreadsheet, database, statistics & GIS + 3-5 African range state crane workers	Variable, ranging from 8 core – 30. None from range states
6B	3 training weeks	2	6	3	Ditto	3	2
7	5	4	3	x	Ditto	5	4
8	6 weeks	10	12	x	Ditto	6	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	5db + 10+ spatial data sets	Ditto	12	5db + 10+ spatial data sets
14A	3 1-week long workshops	2	3	3	Ditto	3	9
15A	3	8			Ditto	3	3
15B	30	6			Ditto	30	4
16A	3 (Grus (electronic, 11 per yr), Crane Link, 1 per yr, Indwa 1 per yr) - all will report on DI activity	3 (x 11; + 1; + 1) = 13	13	13	Ditto	13	3
16B	300	300	300+	300+	Ditto	300	300
16C	50 (international)	50	50+	50+	Ditto	50	50
17A	3 1-week workshops	3 (incorrectly entered)	NA	NA	Ditto	3	NA
17B	Annual SACWG conference	1	1	1	Ditto	1	3
18A	2	1	1	1	Ditto	2	1
19A	2	1	0	0	Ditto	2	1
19C	2	2	5	5	Ditto	2	2
20	£75,000 (over 3 yrs)	£25,000	£35,000	£35,000	Ditto	75	£75,000
22	30	20	20	20	Ditto	80+	20
23	£240,000 (over 3 yrs)	£114,155	£163,311	£163,311	Ditto	240000	£498,886

Table 2 Publications

Type (eg journals, manual, CDs)	Detail (title, author, year)	Publishers (name, city)	Available from (eg contact address, website)	Cost £
All Media	Cranes As Ambassadors for Wetlands – Author Tanya Smith – Feb 2008	Press Release	Hayley Komen	N/A through-out
All Media	Bloukraanvoëls in Die Karoo Word weer in 2008 Gering - Author Bradley Gibbons – Feb 2008	Press Release	Hayley Komen	
Regional Newspapers	Floss Helps Saving Cranes – Author – Patsy Beangstorm – March 2008	Diamond Field Advertiser	Debbie Thiart (crane@ewt.org.za)	
National Newspaper	Cranes to be Tracked – Author unknown – March 2008	The Citizen	Debbie Thiart (crane@ewt.org.za)	
Internet Blog	Photos of Satellite Transmitters being Fitted to Blue Cranes – Blogger : *Murray* – April 2008	Safrinet.tv.blog	Safrinet.tv.blog	
Radio	"Ekoforum" – Author Helen Prinsloo – April 2008	Radio Sonder Grense		
Regional Newspapers	Tracking Blue Cranes in the Karoo – Author Helen Prinsloo April 2008	Barkley East Reporter	Debbie Thiart (crane@ewt.org.za)	
National Newspapers	GPS to give Blue Crane a Lift – Author Anton Ferreira – April 2008	The Times	Debbie Thiart (crane@ewt.org.za)	
Regional Newspapers	Eastern Cape Crane Conservation Update – Author Tanya Smith – April 2008	Barkley East Reporter	Tanya Smith	
EWT Quarterly Magazine	Blue Cranes Moulting in the Karoo – Author Bradley Gibbons – May 2008	Vision 7	Hayley komen	
EWT Quarterly Magazine	A New Chapter – Author Helen Prinsloo May 2008	Vision 7	Hayley Komen	
National Magazine	Care for the Carers – Author Glenn Ramke June 2008	Shape Magazine	Debbie Thiart (crane@ewt.org.za)	
National Magazine	Cranes Found in the North Eastern Cape – Authors Bradley Gibbons and Tanya Smith July 2008	ToGOTo Magazine	Debbie Thiart (crane@ewt.org.za)	
Local Magazine	The Eastern Cape Crane Project Update – Author Tanya Smith July 2008	The Bee-Eater (Vol 59, Part 2)	Tanya Smith	

Type (eg journals, manual, CDs)	Detail (title, author, year)	Publishers (name, city)	Available from (eg contact address, website)	Cost £
Regional Newspaper	Goodbye to Crane Custodian – Author Tanya Smith – July 2008	Barkley East Reporter	Debbie Thiart (crane@ewt.org.za)	
National Radio	Cranes in the Overberg – Bronwyn Botha – July 2008	Radio Sonder Grense		
National Newspaper	Surrogate Mum Saves Birds – Author Sheree Bega – August 2008	The Saturday Star	Debbie Thiart (crane@ewt.org.za)	
Cranemania Blog	Authors – Glenn Ramke, Bradley Gibbons, Tanya Smith, Ursula Franke - ONGOING	http://cranemania.wildlifedirect.org	Debbie Thiart (crane@ewt.org.za)	
Internet	Cranes in the Eastern Cape – Author Tanya Smith	venture@dispatch.co.za	venture@dispatch.co.za	
Crane Newsletter	*Grus*, Monthly, Multi-authored	SACWG, EWT	Debbie Thiart (crane@ewt.org.za)	
Crane Link	Annual publication – multi authored	SACWG and participants and partners	Hayley Komen	
National Newspaper	First Spring on the Wing – Author Sheree Bega Aug 2008	The Saturday Star	Debbie Thiart crane@ewt.org.za	
National Magazine	How the Winks brought Carnes to Barkley East – Author Orrock Robertson Sept 2008	The Farmer's Weekly	Debbie Thiart (crane@ewt.org.za)	
Regional Newspaper	Bewaar die Kraanvoel – Author Ursula Franke Oct 2008	The Hoevelder	Ursula franke	
Regional Newspaper	Bewaar die Kraanvoels op die Hoeveld – Author Ursula Franke Oct 2008	The Hoevelder	Ursula franke	
Presentation	The Year in review – SACWG AGM	Presented by Helen Prinsloo	Debbie Thiart (crane@ewt.org.za)	
Presentation	Author Bradley Gibbons	Presented at the Northern Cape Biodiversity Symposium	Bradley Gibbons	
Presentation	Authors – Kirsten Oliver and Brenda Daly	SACWG and participants Presented at the National Wetlands Indaba	Kirsten Oliver	
National Magazine	Tainted Trade – Authors Gina Hartoog and Kerryn Morisson – Jan 2009	Animal Talk	Gina hartoog	
International TV	Wattle Crane release programme. In	Discovery Channel	Debbie Thiart crane@ewt.org.za	

Type (eg journals, manual, CDs)	Detail (title, author, year)	Publishers (name, city)	Available from (eg contact address, website)	Cost £
	progress/in collaboration with JHB Zoo. Feb 2009			
Regional Magazine	Grey Crowned Cranes – Author Steve McCurrach and Ursula Franke March 09	Bataleurs Newsletter	Info@bataleurs.org	
Regional Newspaper	Drought Affects the Karoo Cranes – Author Elmare Roussouw Feb 2009	East Cape Agri	Bradley Gibbons	
Regional Newspaper	Bloukraansvoel Begin in die Karoo Broei – Author Bradley Gibbons Feb 2009	The Advertiser	Bradley Gibbons	
All Media	National water Week – Author Kerryn Morrison March 2009	Press release	Kerryn Morrison	
Regional Newspaper	Bloukraansvoel Begin in die Karoo Broei – Author Bradley Gibbons Feb 2009	The Advertiser	Bradley Gibbons	
All Media	National water Week – Author Kerryn Morrison March 2009	Press release	Kerryn Morrison	
SCIENTIFIC PUBLICATIONS				
	Proceedings of PAOC	Blue Crane PVA (Attached)	Pettifor et al	
	Proceedings of PAOC	Wattled Crane Habitat Usage (Attached)	Wojtaszekova et al	
Presentation @ PAOC	PAOC-12 - Author Bradley Gibbons	Presented by Bradley Gibbons	Bradley Gibbons	
Presentation @ PAOC	PAOC-12 - Authors Ursula Franke and Henk Bouman	Presented by Ursula Franke	Ursula Franke	To be written as paper

3.4 Progress towards the project purpose and outcomes

AND

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

Quantitative Site Assessments. Katerina Wojtaszekova, an MSc student from Leeds University, spent roughly six months at ZSL analyzing the field data she had collected earlier on a 6 month trip to KZN – the essential question she was asking was why some Wattled Crane breeding sites were no longer being used ("historic") whilst others remained "active". She found statistically significant differences between the two types of sites, with active sites being predominantly "wetter" than the historic sites. The question now became how we could rank

these sites, both active and historic, giving us both “high” and “low” quality sites. High quality Active sites needed pro-active management to ensure their characteristics were not lost, whilst High quality Historic sites could potentially be rehabilitated under the Working for Wetlands programme. We came up with an algorithm to rank all sites (see Attachments Katka 1 – 3.doc) and our aim is not only publish a paper on this technique, but as importantly, ensure the relevant data reaches both the Ezemvelo KZN Wildlife Stewardship programme (breeding wattled Cranes are a key species under their stewardship scheme) and also providing high ranking active and historic sites by catchment to Working for Wetlands. Katerina’s field work allows us to specify the needs of the cranes, alongside the experience of field biologists. Katerina’s results were written up as a paper following presentation at the Pan African Ornithological Congress (PAOC) held in September last year (attached).

Ecological Niche Modelling. QSAs allow binomial modeling as we have information on presence and absence. Often, however, ecologists simply have “presence” data in any cell, alongside considerable physiographic, climatic and biological data (eg landcover type). ENMs use various types of algorithms to predict cells (polygons, generally from Remote Sensed data) that have high or low probabilities of containing the species of interest (isopleths). Kirsten Oliver has taken this work forward (see example Kirsten 1 attached).

Population Viability Analyses of Blue Cranes. Blue Cranes number slightly in excess of 20 000 birds and are effectively endemic to South Africa. Whilst typically a bird of the natural open veld (grassland and karoo), there has been a rapid decline in numbers from “100s of thousands” to the current numbers over the last 40 years, alongside a rapid increase in numbers in the intensive agricultural areas of the Western Cape. Downscaled regional climatic maps (eg Met Office Precis) are effectively “pay your money and take your choice” – of 9 scenarios presented in the IPCC (2008), any area of the country may become warmer, wetter or drier. The only consistent change is a drying and warming pattern effecting the W Cape. Alongside economic factors, this is the area that can and will change most rapidly in SA, and yet holds 60% of the Blue Crane population. We explored “metapopulation” PVAs of Blue Crane numbers (see BC PVA.doc) and whilst the global (ie South African) population looks robust and stable, this is largely based on *current* survival estimates based on good ringing data collected by Kevin Shaw. However, as our paper, also presented at the PAOC, shows, adult mortality only needs to drop slightly in the W Cape in say response to changes in crop type, and the whole house of cards comes tumbling down.

Relational Database: Some summary details have already been provided, but this relational db holds 1000’s of crane records dating back to the 1980s. The importance of collecting data in a structured manner and then storing (with suitable backups) such data cannot be over-emphasised and was part of the dream of the previous Director of EWT, Dr Nic King, currently Director of GBIF. The current CEO, Ms Yolan Friedmann, recognizes the value of such curation and electronic storage too, and she is rolling out an IT4Conservation programme at the moment. The opportunities of marrying crane data with held electronically on other species, as well as direct linkage with Remote Sensed data, makes these data and their sources invaluable. The key of course is that EWT-CC remains committed to the continued updating of the db – this has already got the CEO’s approval and support.

MOUs, Stewardship and Habitat Restoration I have described above why Kerryn and I feel that formal systems need to be put in place between EWT-CC and its partners. My own general view is that MOUs generally constrain creativity and collaboration; however, in these instances, I believe they are necessary as it is important that we work to our evidence-based priorities, and not simply on a more casual basis. Further, the long lead-in times, whether it be for expansion of Stewardship or rehabilitation of a wetland, means that our input must enter the formal planning process of the partner organizations. It also allows us (EWT-CC) to ensure that data collected at considerable time and expense by FOs is in fact being used for its designated purposes. A legal document is also being drawn up by EWT regarding the sharing of (EWT-wide) data with others to ensure proper usage of these valuable resources.

Within the context of habitat restoration, it is worth noting that one of the large agro-forestry companies has found it necessary to make an ecologists post redundant – she worked closely and extensively with our regional FO. This is unfortunate, but there is no evidence that the company is reneging on its commitment to involve EWT-CC in its Forward Planning. The QSAs discussed above are essential for feeding into such planning strategies, as evidence-based information is critical in ensuring "best practice".

Mining: This is a major concern across South Africa, be it uranium mining in the Karoo or yet further open-cast mining for coal in Mpumalanga. A particular threat is in the grasslands of southern Mp and northern KZN. As in many countries, mining is considered a "critical area" that supersedes all other legislation by government, and hence the mining companies are able to appeal to "increased employment" opportunities and promise to restore habitats afterwards. However, often rehabilitation does not occur. EWT is fighting on a claim by claim basis, but at this point delegating the lead role to Birdlife SA, WWF SA, and the Botanical Society. This is a dynamic situation and the outcome at any given time or place uncertain – victory for conservation is only ever temporary. However, just to highlight again the value of the database – we can now easily extract relevant crane information specific to any given area.

Provincial and Municipal legislation plus Regional Biodiversity Planning. Inviting two key players in the provincial conservation bodies (Kevin McCann Ezemevelo KZN Wildlife and Kevin Shaw, Cape Nature) to our recent Forward Strategy workshop was important in making us (EWT-CC) realize how we can best feed into the conservation process, be this at a local level through to regional levels. Each FO then had to link his/her work plan directly to conservation outcomes. The result of this process will made available in our final report: suffice to say it concentrated our minds wonderfully in why we are doing particular work!

4. Monitoring, evaluation and lessons

The position of manager of SACWG was terminated in March this year as a result of the restructuring of EWT-SACWG and EWT-ACWAC into a single body, EWT-CC.

One of the biggest difficulties I came across this past year was keeping an eye on "typical" day-to-day activities from distance – or, to put it another way, without a pro-active manager in the host country committed to the outcomes of the Darwin project, then ensuring that project activities are being carried out is extremely difficult. Further, being in regular e-mail with all participants can be essential, as is the ability that they can download large files. When Kerryn was free to carry out "SACWG" work a noticeable improvement simply in attitude was apparent. We were fortunate too that we had already set up fairly rigid reporting structures, that allowed Kirsten Oliver to pick up things going wrong at an early stage. However, strictly this was not part of her job remit.

We were lucky too that this was effectively a year of analyses rather than data collection, so that I was able to carry out the requisite analyses at distance. However, in December 2008 I made a two week trip through SA, calling in and spending time with three FOs. The difference in quality between the FOs was striking – one was able to use her initiative and had formed a wide network with the local conservation community that maximized the impact of her work. She also saw the "scientific" reasons why work had to be undertaken and was in fact bubbling with ideas of her own. I should have done such a trip at an earlier stage of the project, although it is not clear to me how I could have improved the situation, as we always started off the workshops from basic principals before getting into more "complex" areas. Certainly this trip highlighted the need for a manager to actively visit the FOs on a regular basis and ensure work is carried out to a correct standard. One of my concerns is whether Kerryn Morrison will have the time carry out such regular visits when she has so many other commitments. However, both she and her line-manager (both ICF and EWT) are aware of these constraints.

To my mind, the two biggest failures of this project are 1) lack of *real* integration between the EE work and the "crane work", and 2) the fact that we will not be producing an integrated business plan alongside the Forward Strategy. This latter has already been discussed under 3.1.b a. 1) reflects a host of issues. The integrated EE plan was drawn up by CLG staff who were already overstretched and left soon after this project started. The person then allocated to take responsibility for this work had very fixed ideas and did not understand science to the extent that the CEO had to state very clearly what CLG was meant to be delivering. Under Sinegugu and Samson, this EE work has every opportunity to grow and become more integrated (Samson was mentored in the early years by one of the current crane FOs at Wakkerstroom). Further, if we (or at least me) was serious about EE amongst the disadvantaged peoples of South Africa, then far more DI monies should have been diverted to the CLG (they received 6% if the funds allocated to EWT). Having said this, the Environmental Awareness Officers or Rural Eco Warriors as they are known in SA have achieved a massive outreach programme, to the extent that Bongi received an International prize (**Women's World Summit Foundation Prize** for women's creativity in rural life). Similarly, SACWG could not have reached all its other achievements if it diverted time to greater integration between CLG and SACWG. The fact that EWT-CC now employs Osiman with a specific remit to work in the "old Transkei" and on a E KZN W Stewardship project in community areas may see a change in emphasis – both are excellent at their respective tasks and would integrate well.

The referee asked extensive questions on assessment in the last report and I attempted to answer these as best I could in my half-year report. As I said at the time, such assessments would be almost full time projects in themselves if they were to provide statistically meaningful quantitative data – I agree that "best practice" and meta-analyses within Darwin might be useful – but personally we set very specific quantitative goals that allowed us to measure our progress. Furthermore, I can well envisage a project undertaken without the infrastructure present in SA or one more tied to community development would be very difficult to both manage and monitor - as I said above – a host country person committed to the project is essential.

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

I am writing this from home and do not have access to the referee's comments regarding our last submission. However, from memory, most of the queries required a response in the half-yearly report, which I did. If I have missed any major queries, please let me know and I can either respond immediately or incorporate our response in the Final Report.

6. Other comments on progress not covered elsewhere

This comment refers to the Scoping Applications and hence may not be relevant here, but I would like to place on record, that whilst I value the award of monies to let me visit colleagues to develop a new proposal (and I believe the development of projects from the bottom-up to be essential for successful work), these awards are made only to UK citizens. I frequently come across situations where Regional Meeting X is to be held in Addis Ababa or Nairobi or wherever, and a lot of work goes into its planning etc, only for people from outside the city (occasionally country) being unable to make the workshop because of lack of travel costs. This is *NOT* a critique of Darwin, as many of the examples I am thinking of relate to other organizations. But I do think Darwin may like to consider this point in relation to the scoping proposals. I know the one I submitted (but failed to get), would have led to difficulties in finding monies for key workers from other countries attending the workshop. I hope this critique is taken in the spirit intended!

7. Sustainability

The restructuring of SACWG into EWT-CC whilst in part forced on us, is also partly a blessing in disguise in that whilst strictly the MOU between ICF (International Crane Foundation) and EWT specifies that work in South Africa is the sole financial responsibility of EWT, Kerryn Morrison's contacts with ICF and the wider international conservation community will only help to bring grant opportunities to EWT-CC's notice. Further, certain key crane areas (eg the Wild Coast and grasslands of SA) are now attracting international funding interest (eg CI), again opening up funding opportunities.

The completion of the relational crane database is a bedrock to ensure that EWT-CC has long-term sustainability – it has turned ideas held by EWT Senior Management into reality, as well as demonstrating what can be done with such geo-spatial data.

Finally, the EWT-CC staff have a very strong core or nucleus of field officers and db & GIS experts, led a by an internationally recognized crane worker. Despite the difficulties of the past year and wasted money and opportunities, I believe EWT-CC will continue to be a leading working group within EWT.

8. Dissemination

See above

9. Project Expenditure

Table 3 Project expenditure during the reporting period (Defra Financial Year 1 April 2008 to 31 March 2009)

Item	**Budget** (please indicate which document you refer to if other than your project application or annual grant offer letter)	Expenditure	Variance
Rent, rates, heating, overheads etc			
Office costs (eg postage, telephone, stationery)			
Travel and subsistence			
Printing			
Conferences, seminars, etc			
Capital items/equipment (specify)			
Others (specify)			
Salaries (specify by individual) RA Pettifor K Oliver (SA) CLG			
TOTAL			

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 LTS and the Darwin Secretariat to publish the content of this section

Annex 1 Report of progress and achievements against Logical Framework for Financial Year: 2008/09

Project summary	Measurable Indicators	Progress and Achievements April 2008 - March 2009	Actions required/planned for next period
Goal: *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* *The conservation of biological diversity,* *The sustainable use of its components, and* *The fair and equitable sharing of the benefits arising out of the utilisation of genetic resources*		*Highlights include completed "metapopulation" Blue Crane PVA, statistical comparison between occupied and "historic" Wattled Crane nests; development of "Quantitative Site Assessments (QSAs)", development of Ecological Niche Models for Wattled Crane, basic completion of relational database, ongoing training of staff, merging of the two EWT "crane Groups" into single "Crane Conservation" grouping; Development of Forward Strategy for EWT CC. Also much closer links with partners & providing information relevant to Stewardship and other conservation legislation in relation to CBD*	*(do not fill not applicable)*
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	● 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	Relational database for all SACWG data COMPLETED plus a lasting legacy for data collation and curation into future; Preliminary QSAs completed for all Wattled Crane and	Data continues to be cleaned as errors become apparent during analyses Quantitative Site Assessments completed for all 3 species across SA & made available to provincial conservation bodies and municipal

Project summary	Measurable Indicators	Progress and Achievements April 2008 - March 2009	Actions required/planned for next period
institutional responsibilities relating to the CBD	Environmental Awareness. BTEC & BSc Hons projects completed	Blue Crane – Grey Crowned Crane part of MSc study Ecological Niche Modelling of Wattled Crane using these data plus running national training courses PVAs completed formally for Blue Cranes & informally for Wattled Cranes (latter built to inform WC Recovery Programme) Providing analytic training and enhancing environmental education Direct involvement with Stewardship Programme & Working for Wetlands, especially thro QSAs.	legislators ENM work to continue & be linked with the Wattled Crane binomial GLM approach Data MUST be made available to Working for Wetlands CAR (Co-ordinated Avifaunal Roadcounts) to be analysed & linked to National Land Cover – GIS side is current MSc student project, but statistical dispersion of data still problematic – may inform PVAs Formal linkage with SANBI & other partners to be initiated
Output 1. Management recommendations from PHVA models & sensitivity maps for all 3 crane species in South Africa (YEAR 3 OUTPUT)	Crane distribution, breeding and non-breeding sites, environmental variables and threats (e.g. powerlines) superimposed on maps Crane demographic parameters extracted from statistical models PHVA models and sensitivity maps produced for each of the 3 crane species by the end of Yr 3	Spatial data essential for building up of Risk sensitivity maps Targeted collection of breeding parameters essential for PVAs Design and implementation of relational database essential platform for current data collection and analysis and curation well into future	
Activity 1. Demographic & habitat data collected on all 3 species using standardised protocols, aerial surveys and radio-transmitters; Ground truthing of relevant wetland inventory sites;		Undertaken & completed bar satellite transmitters – see attached docs Ongoing – needs > integration/mgmt with WfW Ongoing Ongoing	

Project summary	Measurable Indicators	Progress and Achievements April 2008 - March 2009	Actions required/planned for next period
Cleaning of existing data; Setting up of EWT GIS Unit; Construction of relational spatial database; Sourcing and processing of GIS data layers;		Ongoing Completed Completed	
Output 2. Information for inclusion in bioregional plans and statutory processes around threatened and protected species and ecosystems		Year 3 indicators – PVAs and QSAs	
Activity 2.1. Initial analyses completed	Data analyses of fecundity & survival (CMR) underway, plus PVA structure and Risk Sensitivity Analyses started.	CMRs undertaken "Metatpopulation" Blue Crane PVA run Risk Sensitivity Analyses now termed Quantitative Site Analyses (QSAs) Final definitive QSA ranking needed for Blue & Wattled Cranes (will feed into National and Provincial Stewardship Scheme under existing legislation	
Output 3. Forward Strategy for National Crane Conservation		Year 3	
Activity 3.1. Writing of Forward Strategy Activity 3.2. Forward Business Strategy		Nearly completed Latter unlikely to be undertaken – see comments above	
Output 4. Collaborative partnership with Working for Wetlands Programme	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 2 Initiation of Working for Wetlands projects at important crane sites including rehabilitation and poverty alleviation from Yr 2	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.	
Activity 4.1. Priority crane wetland assessment (Working for Wetlands) – given as activity in Year 3 in Log frame = QSAs.	Activities undertaken, but as indicated above, increased priority to be given to wetland rehabilitation relevant to crane conservation.	Greater strategic management and planning of national wetland inventory for conservation purposes required on part of WfW. This has been expressed in appropriate fora and is being remedied. SACWG/DI actively feeding into process, currently primarily thro ground-truthing, but also K	

Project summary	Measurable Indicators	Progress and Achievements April 2008 - March 2009	Actions required/planned for next period
Initiation of Working for Wetlands projects at important crane sites including rehabilitation and poverty alleviation Ground-truthing of remote sensed wetlands		Oliver sitting on Committee. We are also embarked on Quantitative Site Analyses that will prioritise wetlands for rehabilitation. We recognise that collaborative work on both sides needs formal *systems* putting in place to ensure data and requests not lost. In fairness, there have been major changes of key personnel and their responsibilities both within EWT and SANBI. These "MOUs" are seen as priorities	
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. No further progress to date	
Activity 5.1. Undertake training	External consultants to be used – planned for 2007	To be undertaken by EWT – part of HR remit	
Output 6. South African capacity in data analysis including statistical methods and spatial analysis, GIS database management	SACWG and other interested persons trained in workshop modules	Training going to plan: overviews of population dynamics, PVAs, relational databases & GIS. Intensive courses now given in sampling design, spreadsheet usage, PVA modelling and GIS usage.	
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.	Adjacent comments still appropriate in Year 2. However SACWG staff have proved excellent learners and our courses will prove a lasting legacy. Training in statistical analyses, except the most basic, was planned using "R". My experience of training the group in Excel, ArcGIS and Access has made me aware that unless trainees use a package on a regular basis (& R is command driven) then we would be wasting our time. I have tried to get the key concepts of means, variance, and significant trends over to the staff during other work.	
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. Whilst Kerryn Morrison (ACWAC Manager) was also line-manager of Helen Prinsloo (SACWG), we hoped for some mutual exchange of skills between countries - this did not materialise	

Project summary	Measurable Indicators	Progress and Achievements April 2008 - March 2009	Actions required/planned for next period
Activity 7.1. Range state training	Not carried out – seeking funding to enable attendance by relevant range state biologists	See above	
Output 8. Fully functional GIS unit for management of crane and associated endemics and habitat within EWT	GIS unit set up and operational	We employed Kirsten Oliver in the full knowledge that her primary skills lay in GIS and much less so in data base design and implementation. We were 7 months late in appointing to this post, and in hind sight we *may* have been better off putting the db design out to tender. However, even today and running nearly 12 months late (although we have run the GIS work in parallel and so are not as behind as appears) I am still of the opinion that we were right in persisting with training a SACWG/EWT person to design and implement databases. Kirsten will continue to contribute to SACWG and probably other EWT Working Group databases beyond the lifetime of this project. *These were the comments written this time last year, and despite much swearing, I believe we made the right choice.* If there is any single lasting legacy that can be associated with this project it is getting the relational database fully populated and functional – Kirsten can now use her true skills – GIS!	
Activity 8.1 Collect & collate spatial data & begin GIS processing 8.2 Automated data checking and automated seamless inputting of field workers data sheets 8.3 Fully populated database with functional query facilities	I note that included in this output is effectively a statement concerning full functionality of the database, including seamless integration between fieldworker Excel sheets and automated reading into Access. They are both MS products and should happily talk to each other – NOPE! Kirsten has had to receive advanced training in VBN and query and general script writing to take this forward to the standard we wish. These frustrations have not been aided by "lost" and/or historic data still appearing, but generally in formats requiring extensive cleaning and appropriate reformatting (again often using code). We are getting there and this	The adjacent comments still apply ... but I have every confidence in Kirsten's perseverance and the ultimate automation between the Excel field sheets and the Access hub! Training of staff in understanding relational databases, the need for common links, and how to query databases is still an ongoing process that Kirsten will continue to take forward post-Darwin	

Project summary	Measurable Indicators	Progress and Achievements April 2008 - March 2009	Actions required/planned for next period
	will be a major legacy of the Darwin project – just very time-consuming and frustrating.		
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. Probably within the next 5 years an African wide review of crane status is envisaged	
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	This work was not undertaken by the newly appointed manager to SACWG in 2008, and will unfortunately not be seamlessly integrated into the Forward Strategy. However, there is much greater devolvement of responsibility to the Field Officers and certain key staff now have the national and/or international profiles to take this side of the work forward	
Activity 10.1. Review & update SACWG Business Plan		N/A – the key personnel in this area are aware of their responsibilities and obligations	
Output 11 Expanded and enhanced community environment education programme	Minimum of 800 school teachers and 300 community leaders trained and supported per year in accredited EE ● 10 Environmental Awareness Officers trained per year	After considerable problems in Year 1, the EE component seems to be getting back on track following restructuring of CLG (Community Leadership Group within EWT) Note bene – the figures given in LH box were entered incorrectly on original application: the correct DI component was to be 3 Environmental Awareness Officers trained, alongside 200 teachers and 100 Community leaders in Environmental Education skills. On target, and despite losing Sinegugu Zukulu, Samson Phakathi will be taking these aspects of EE forward	
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	Actual figures given in table – on course to meet targets. Note two EAOs passed their Stage 5 accredited exams – a major achievement, whilst one of the REWs Bongi Khoza won the International WWSF Prize for Women's Creativity in Rural Life Three of the CLG were also supported by Darwin funding and EWT to	

Project summary	Measurable Indicators	Progress and Achievements April 2008 - March 2009	Actions required/planned for next period
	11.3. Large numbers of farmers and labourers reached by SACWG/DI field workers, averaging 10 farms and associated farmers per week.	attend three weeks In India on a sponsored Tata Jagriti Yatra train journey, where roughly 300 young and enthusiastic conservationists (primarily from India) travelled south, and then back north, being mentored by experienced conservation biologists, social and aid workers, alongside entrepreneurs. This trip was organized by Gitanjali.Banerjee, who has just completed her PhD at Princeton. She set this up to mirror a similar experience she had some ten years ago which was highly formative. Within this context of international relations, Kirsten Oliver and Bronwyn Botha attended the DEFRA/DI Tanzanian workshop in November through support from both Darwin and EWT	
Output 12 Publications & Publicity	None explicitly highlighted in Year 2 – but see Table 2 below.	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.	Additional outputs: Two oral presentations accepted by the Pan African Ornithological Congress – see attachments.		

Annex 2 Project's full current logframe

Project summary	Measurable Indicators	Means of verification	Important Assumptions
Goal: To draw on expertise relevant to biodiversity from within the United Kingdom to work with local partners in countries rich in biodiversity but poor in resources to achieve the conservation of biological diversity, the sustainable use of its components, and the fair and equitable sharing of benefits arising out of the utilisation of genetic resources			
Purpose ● To 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	● 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	● 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	● 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
Outputs ● Management recommendations from PHVA models & sensitivity maps for all 3 crane species in South Africa	● 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 Y2 ● PHVA models	● PHVA and sensitivity map reports ● Management reports	● Delivery of national georeferenced data on schedule ● Relevant data available for PHVA analyses

	and sensitivity maps produced for each of the 3 crane species by the end of Yr 2		
● Information for inclusion in bioregional plans and statutory processes around threatened and protected species and ecosystems	● 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 design of SANBI National Grassland Biodiversity	● Presentation of recommendations ● Participation in workshops and stakeholder forums	● Recommendations taken into consideration in policy and legislation. ● Processes will have started within relevant time frame
● Forward Strategy for National Crane Conservation 2009 - 2013	Programme by end Yr 3 ● Workshop undertaken,	● Documentation and Presentation	● Participation and support of all relevant organisations ● Government funding for Working for Wetlands Programme continues
● Collaborative partnership with Working for Wetlands Programme	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	● List of key wetlands to be included in planning ● Rehabilitation plans ● Populated wetland inventory database ● Monthly project progress reports	
● Capacity in advocacy and lobbying techniques	● Initiation of Working for Wetlands projects at important crane sites including	● Numbers of staff trained	● Staff retained in present or higher positions
● South African capacity in data analysis including statistical methods and spatial analysis, GIS database management	rehabilitation and poverty alleviationfrom Yr 1 ● 7 SACWG field staff & 25 associated EWT WG staff trained by end Yr 1 ● Fully operational National crane	● Crane monitoring data in database ● Numbers of staff trained ● Number of status reports	● Staff retained in present or higher position ● Continued support from International Crane Foundation

● 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 ● Financial forward strategy for crane conservation ● Expanded and enhanced community environment education programme ● Publications & Publicity	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 making Yrs 1-3 ● 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	● Number of staff trained ● Number and quality of sensitivity maps and status reports ● Number and content of reports ● Report provided to SACWC ● Number of trained teachers & leaders ● Progress reports ● Number of papers submitted; publicity material sent to Darwin Initiative	– Africa Region ● Capacity for optimum use of unit and on-going EWT support ● Relevant information available ● Suitable donors available ● Teachers have continued interest in EE training ● EE accreditation on time ● EE material being taken up by target groups

Activities	Activity Milestones	Assumptions
Data Collection, Collation and Analysis	Year 1: 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. Year 2: 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. Year 3: 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	● 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
Environmental Awareness	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.	Local support for Conservation Leadership Group (EWT) continues.
Training	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	Local support for EWT Working Groups continues

Management Recommendations and Action	Year 3: 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	● 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
Reporting	Year 1: 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. Year 2: 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. Year 3: 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	Project implementation timetable is kept to.

Annex 3 Onwards – supplementary material (optional but encouraged as evidence of project achievement)

Katka1.doc
Katka2.doc
Katka3.doc
REWS08.doc
WC PAOC .doc
BC PVA.doc
Wattled_Crane_SA.jpeg

Checklist for submission

	Check
Is the report less than 5MB? If so, please email to Darwin-Projects@ltsi.co.uk putting the project number in the Subject line.	YES
Is your report more than 5MB? If so, please advise Darwin-Projects@ltsi.co.uk that the report will be send by post on CD, putting the project number in the Subject line.	NO
Have you included means of verification? You need not submit every project document, but the main outputs and a selection of the others would strengthen the report.	YES
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.	NO
Have you involved your partners in preparation of the report and named the main contributors	YES
Have you completed the Project Expenditure table fully?	
Do not include claim forms or other communications with this report. NO	