



Action Plans for the Conservation of Globally Threatened Birds in Africa

International Lappet-faced Vulture, *Torgos tracheliotus*, Action
Plan Stakeholder Workshop, Semien Hotel, Addis Ababa, 16-20 June 2003

Workshop Report



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Summary

A workshop to draw up the international species conservation action plan for the Lappet-faced Vulture (*Torgos tracheliotus*), a globally threatened bird species, was held in Ethiopia from 16 - 20 June 2003. The workshop brought together species experts, national environmental NGOs and government officials from seven Lappet-faced Vulture range-states.

This workshop was the 6th of 7 international species action plans for globally threatened bird species to be compiled under the auspices of the 3 year BirdLife International Species Action Plan Project supported and implemented by 17 African BirdLife partner organisations in partnership with the RSPB, with funding provided by the RSPB and UK Department for the Environment, Food and Rural Affairs (DEFRA) under the Darwin Initiative. The format and process used in the preparation of this plan has contributed significantly to raising the awareness of this species and building the capacity of participants in species conservation.

The long-term vision of this action plan is to have a self sustained, healthy population of the Lappet-faced Vulture across its entire range and the aim is to have initiatives implemented to address the threats necessary to stabilise and increase the species populations across its range. The immediate objectives are to increase the artificially lowered productivity, reduce unnaturally high adult/juvenile mortality and improve geographic knowledge of the Lappet-faced Vulture. The priority specific objectives include reducing electrocution, nest destruction, inadvertent poisoning and food shortages. The action plan will be revised after 5 years.

General introduction

Action Plans for the Conservation of Globally threatened birds in Africa (Species Action Plans Project) is a 3-year BirdLife project, which aims to build the capacity for species action planning in Africa. The project started in April 2001 and is coordinated on behalf of the BirdLife International African Species Working Group by Nature Uganda, BirdLife South Africa and the RSPB (BirdLife Partners in Uganda, South Africa and UK respectively). It is implemented by BirdLife partner organisations in 17 African countries and funded by the RSPB and the UK Department for the Environment, Food and Rural Affairs (DEFRA) under the Darwin Initiative.

A Species Action Plan (SAP) is: “a scientifically authoritative, strategic document that defines specific, measurable objectives and actions for conserving priority species. It should be achievable, time-bound and involve all appropriate stakeholders”. In previous workshops involving specialists from BirdLife partner organisation in Africa, RSPB and the BirdLife Secretariat, a format and process for species action planning in Africa was developed (see Annex 1) and is currently being used to develop SAPs in Africa and beyond.

Lappet-faced Vulture *Torgos tracheliotus*, is among the 7 globally threatened bird species in Africa that was chosen for the development of an international species action plan under the SAP project. Lappet-faced Vulture is found in a total of 41 countries worldwide and is classified as globally Vulnerable since only a small, declining population remains, owing to poisoning and persecution. Thus an international SAP for the species is very vital.

2. Workshop

2.1 Introduction

The workshop was organised by the BirdLife African Species Working Group and hosted by the Ethiopian Wildlife and Natural History Society. Participants included governmental and non-governmental representative, BirdLife Partner representatives (National Species Action Plan Coordinators or contact persons) and their government counterparts. Participants were drawn from South Africa, Namibia, Burundi, Uganda, Djibouti, Ethiopia and Egypt. The workshop was facilitated by Eric Sande, Steven Evans and Anteneh Shimelis of Nature Uganda, BirdLife South Africa and Ethiopian Wildlife and Natural History Society respectively.

2.2 Workshop Programme and Implementation

The workshop was based on the species action plan format developed by the SAP Project (Annex 1). Sessions included short presentations, but mainly facilitated discussions, both in plenary and group work using various aids and techniques. The result of each group work session was subsequently presented to the plenary, discussed and agreed before moving on to the next task. Each day commenced with the facilitators recapping the previous day's work and ended with a simple evaluation exercise. The workshop programme is shown in Annex 2. All the sessions were completed in three days because some participants were leaving on the 5th day. Below is a summary of major sessions.

Day One-16th June

2.2.1 Introduction

The workshop was officially opened by Dr. Girma Balcha, General Manager of the Institute of Biodiversity Conservation and Research, Addis Ababa, Ethiopia. He emphasised the need for a concerted conservation effort for such a widely distributed globally threatened species. Participants introduced themselves using individual cards to record their names, organisation, position, where based, experience in species conservation and their expectations of the workshop. Participants' details and expectations are shown in Annex 3 and Annex 4 respectively. A general overview of the African

Species Working Group, the SAP project and its progress was presented (Annex 5). Participants were then introduced to the workshop techniques - the rules for the use of cards and flipcharts (Annex 6).

2.2.2 Background information for SAP for Lapped-faced Vulture

The background material on the Lapped-faced Vulture that had previously been circulated to the participants was presented and participants were given an opportunity to provide new information where appropriate and make corrections where necessary. The participants divided into country groups and filled provided information for inclusion in the background material relevant to their country. This included new country specific information on population status, distribution and seasonal occurrence, local distribution, numbers, protected area status of the species, national legislation and signatories to international conservation treaties and on-going projects with respect to Lapped-faced Vulture conservation. Participants then contributed their ideas on the factors affecting the success of the action plan (risks and opportunities).

2.2.3 Press Release and Stakeholder Analysis

After a short presentation on how to prepare a good press release and why it is need in the development of an action plan, a small group was appointed to prepare one, for inclusion in the report. Participants from each range-state were asked to identify the major stakeholders from their respective country that should be involved in Lapped-faced Vulture conservation, each stakeholders' interests, activities, impact of activities on the Lapped-faced Vulture (positive or negative), intensity of the impact (low, medium, high, critical) and proposed activities that may be included in the action plan.

Day two-17th June

2.2.4 Identification of main threats for Lapped-faced Vulture

This was done using cards, one for each concept or threat. The species is classified as Vulnerable because of low population estimate (<10,000 birds), which is caused mainly by continuing unnaturally high mortality of mature individuals and also possibly because of naturally low population and very limited data on population size and distribution in range-states. Participants brainstormed the direct cause of low productivity and unnaturally high adult/juvenile mortality. The direct causes of low productivity identified were: low food availability, disease, predation, nest destruction, fragmented/isolated inbred population, calcium deficiency, egg collection and compression effect. The identified causes of high adult and juvenile mortality were: drowning, electrocution, deliberate killings by man, power collisions, air collisions, increased shortage of food, inadvertent poisoning, gin traps genetic and dispersal problems.

2.2.5 The Problem tree

Participants divided into two groups. One group analysed the causes of low productivity and the tackled the causes of high adult and juvenile mortality. This was done by developing the problem tree analysing the specific cause and effect relationship of each issue. This analysis highlighted all the threats /issues facing the Lapped-faced Vulture. These were then presented to and agreed by plenary. The end result was a Lapped-faced Vulture Problem Tree outlining all the threats and issues affecting the species and the relationship between them.

2.2.6 Prioritisation of main issues/threats of the Lapped-faced Vulture

Through a facilitated discussion in the plenary, participants prioritised the direct causes of low productivity and high adult/juvenile mortality on the Lapped-faced Vulture as low, medium, high and critical.

2.2.7 Vision, aim and objectives of the Action Plan

Participants agreed that this action plan should have a life-span of 5 years; after which it should be revised. In plenary and based on the results of the problem tree, participants formulated the vision, aim, two immediate objectives and eight objectives constituting the 5-year plan. The objectives were prioritised according to the priorities of the respective threats/issues in the problem tree from which they were derived.

Day Three-18th June

2.2.8 Field visit

Participants had a chance to visit the Addis Ababa abattoir and saw a number of vulture and other species (White-backed Vulture, Hooded Vulture and Rueppell's Griffon) and then visited Menagesha Suba Forest Reserve and saw a number of raptor species and Ethiopian endemics.

Day Four-19th June

2.2.9 Formulation of project concepts

In the same two groups that developed the two branches of the problem tree (sect. 2.2.5), participants developed projects concepts necessary to achieve the respective objectives. Participants then reviewed the stakeholder analysis and the problems tree to check whether all the SAP activities suggested in the stakeholder analysis and all the issues in the problem tree had been considered in the projects designed. The projects concepts were then refined accordingly.

2.2.10 Completion of the projects' Table

In the same two groups as section 2.2.9, participants completed the projects table, placing the projects under the headings: Policy and Legislation, Species and Habitat, Monitoring and Research, Public Awareness and Training and Community Involvement. For each project, the following were considered: the project's overall priority (its impact on the conservation of the species) as low, medium, high and critical, agencies responsible, time scale, the cost (low=<US\$ 10,000, medium=US\$ 10,000-US\$ 50,000, high=US\$ >50,000), indicators, risks and opportunities specific to each project Table. The projects table was amended accordingly and agreed in plenary.

2.2.11 Monitoring & Evaluation (M&E) Plan

Participants agreed that it is important to monitor the implementation of the International Lapped-faced Vulture Action Plan and that the projects table (sect. 2.2.10) should be used to achieve this with some modification. By adding one column for completion date and another for remarks the projects table becomes the reporting format for the M & E Plan. All agreed on the need for a central body (Lapped-faced Vulture Interest Group) to monitor and evaluate progress. This monitoring table should be sent out within a year to check what has been done to conserve the species. As far as creation of the Lapped-faced Vulture Interest Group is concerned, participants noted that there is need for a wider consultation with the other vulture experts and Southern Africa based Vulture Study Group and agreed that the issue should be tabled at a round table discussion during the Pan-African Ornithological Congress 11 that will take place in Tunisia in November 2004.

2.2.12 Next steps

The different activities up to the time of publishing the action plan, the timelines and the people taking the lead are shown in table below:

Timeline	Activity	Responsible
4 th week of June	Workshop report (with action plan draft 1) to all workshop participants	ES/SE/AS
1 st week of August	Return of comments to ES, SE, AS	Workshop participants
3 rd week of August	2 nd draft to workshop participants, experts and BirdLife partners	ES, SE, AS
3 rd week of September	Feedback to ES, SE, AS	All delegates, experts and BirdLife partners
2 nd week of October	3 rd draft <ul style="list-style-type: none">To everyone if there are major changes.To those that responded to 2nd draft if changes are minor	ES, SE, AS
4 th week of October	4 th draft <ul style="list-style-type: none">Final if all comments to 3rd draft are minorIf there are major changes, then send 4th draft to all	ES, SE, AS

ES=Eric Sande, SE=Steve Evans, AS=Anteneh Shimelis

3. Results

The workshop was attended by 11 participants from 5 NGO's and 6 government officials. Three government officials and one NGO representative were Vulture specialists. Although many of the range-states were not represented, countries where the threats to the species are high (BirdLife International 2000) (Namibia and South Africa) were represented.

The first draft of the action plan is shown in Annex 7.

In the draft plan, the gaps and new information for different countries are presented as tables 1, 2 and 3 showing the population status, local distribution and national legislation. The stakeholders for the Lappet-faced Vulture and how they impact on the species are shown in Table 4. The cause-effect relationship of the issues/threats affecting the Lappet-faced Vulture and their relative importance to the conservation of the species (i.e. priority issues/threats) are shown in the Problem Tree (Figure 2). The vision, aim and objectives of the plan are indicated in Table 5. The projects/activities, their relative importance of each project to the conservation of the species, agencies responsible to implement the project, time scale and cost are shown in Table 6. The factors affecting the implementation of the plan and the on-going projects that may benefit the species are shown in Tables 7 and 8 respectively. The press release, which the participants will modify and publish in their countries, is shown in Annex 8.

4. Evaluation

At the end of each day, participants were asked to fill in a simple form to evaluate the mood of the group. The results are presented in Annex 9. Participants were generally positive about the workshop. They appreciated the format and process used and promised to apply it to produce plans for their priority species in the respective countries.

Annexes

Annex 1: BirdLife Africa Species Action Plan Process and Format

Process:

1. Identify species for which action planning is appropriate
2. Identify key individuals
3. Identify workshop participants
4. Collate background information (literature and questionnaire, if appropriate)
5. Produce background section of Action Plan
6. Hold participative, facilitated planning workshop
7. Draft Action Plan and seek endorsement by participants
8. Seek endorsement with relevant agencies
9. Produce and circulate Action Plan
10. Implement Action Plan
11. Review Action Plan following agreed Monitoring and Evaluation system and publish results
12. Update Action Plan at the end of its life

Format:

Presentation:

- *Not too plain, not too glossy (This will vary from country to country)¹*
- *Appropriate language, executive summary also in English*

A) Front Cover

- Logos
- Picture of species
- Date
- Title
- Subtitle
- National Emblem²

B) Inside Front cover

- Authors
- Contributors
- Interest Group
- Credits
- Citation
- Thanks to local people, if appropriate

Foreword

- *Government official, Head of state of Royalty*
- *Internationally famous conservationist*

Table of contents

- *clear and all on one page*

Acronyms

Definition

- What is a Species Action Plan?
- Why this plan?
- Geographic scope
- Introduce SAP history and objectives
- National plan to refer to International plan

0. Executive summary

- *No more than 1 page.*
- *Multilingual, if appropriate*

¹ *Italics: notes*

² underlined: national action plans only

- status
- distribution
- conservation priority
- threats
- aim, objectives and major activities
- history of plan and stakeholders
- wider benefits

1. Introduction

- *no more than 1 page*
 - introduce species (distribution, status, threats, emotive)
 - introduce limiting factors
 - introduce stakeholders
 - biodiversity justification and benefits of plan and outcome to species and communities
 - aim and objectives with timescale

2. Background Information

- taxonomy as relevant
- distribution and population status
 - global, (*present as summary table*)
 - local (*present as summary table*)

Table: Population and distribution

Country	Population (plus quality code)	Distribution	Population trend (plus quality code)	Seasonal occurrence
	<i>Estimate of total number</i>	<i>Widespread, local</i>	<i>Stable, increasing, decreasing</i>	<i>Resident or months</i>

- potential habitat (if appropriate)
- map
- movements, if relevant to plan
- protection status
 - legal protection (*in table, country by country*)
 - international legislation (*in table*)
 - does it occur in protected areas and IBAs? (*list in table per country*)
- Relationship with other SAPs and biodiversity strategies
- Habitat requirements of the species
- Biology and ecology
 - *only relevant information*
 - *bibliography contains all references*
- Threats and potential threats
 - *Short description of each threat*
 - *Develop list of key words to ensure consistency of use between plans*
 - *Link threats with ecology and biology of species*
 - *Always try to quantify threats*
 - *Rank threats*
 - *State of current knowledge*
 - *Gap analysis*
 - *Summarise as problem tree, start with conservation status, prioritise direct causes*
(◆◆◆◆: critical, ◆◆◆: high, ◆◆: medium, ◆: low, ? unknown)
- Stakeholder Analysis
 - *Summary table*
- Factors influencing success of action plan implementation
 - Socio-cultural effects

- Economic implications
- Strengths and weaknesses of existing conservation measures
- Administrative/ political set-up
- Biology of species (e.g. does it breed in captivity, how specialised is it, how long does it live?)
- Local expertise and interest
- Cultural attitudes
- Appeal of species (eco-tourism)
- Resources

3. Action Programme

- *Aims, objective and projects developed from problem tree*
 - Vision
 - *Long term vision for the status of species*
 - *Specific and measurable/ clear indicators*
 - *Time frame*
 - *Add short text*
 - Aim
 - *Aim of the species action plan*
 - *Specific and measurable/ clear indicators*
 - *Time frame*
 - *Targets might differ between national and international plan, but national plan contributes and refers to international plan*
 - *Use IUCN guidelines, Red Data Book, World Bird Database when applicable*
 - *Add short explanatory text*
 - Objectives
 - *Strategic objectives*
 - *Specific and measurable/ clear indicators*
 - *Use key headings*
 - *Prioritised (◆-◆◆◆◆,?)*
 - *Add short explanatory text for each objective (include summary of activities)*
 - Projects
 - *Table and short description for each*
 - *Should always refer to benefits to local people*
 - *Number each project according to related objective*
 - *List under the following headings:*
 - *Policy and legislation*
 - *Species and habitat*
 - *Monitoring and research*
 - *Public awareness and training*
 - *Community involvement*
 - *International*



Summary table of proposed Projects

Project	Countries	Overall Priority	Agencies responsible	Cost	Time scale	Indicators	Risks and Opportunities
A) Policy and legislation							
1.1 Name of project	List of countries with priorities ◆◆◆◆, ◆◆◆◆	Score ◆- ◆◆◆◆ ,?	Generic for international plan Specific for national plan	National plan only	Length, start		
1.2 Name of project							
3.3 Name of project							
B) Species and habitat							
1.5 Name of project							
C) Monitoring and research							
Etc.							
D) Public awareness and training							
E) Community involvement							
F) International							
Etc.							

- Monitoring and Evaluation Plan

Acknowledgements

Bibliography

Appendices

- List of relevant web pages
- Entry from Threatened Birds of the World
- List of protected areas and IBAs where species occurs
- Occupied areas most in need of action
- List of contacts (stakeholders, Species Interest Group, others)



Annex 2: Participants Workshop Program
Action Plans for the Conservation of Globally Threatened Birds in Africa
International Species Action Plan Stakeholder Workshop, Lappet-faced Vulture, *Torgos tracheliotus*, Semien Hotel, 16-20 June 2003
Workshop Programme

	Monday 16	Tuesday 17	Wed 18	Thursday 19	Friday 20
830-1300	<p>Opening (EWNHS)</p> <p><i>Introductions</i></p> <ul style="list-style-type: none"> Self introductions (SE) <ul style="list-style-type: none"> Expectations. ASWG & SAP project (ES) Workshop Program (ES) Workshop techniques (SE) <p align="center">Tea/Coffee break</p> <p>Presentation Background information (AS)</p> <p>Plenary session Gaps in knowledge with regards to document presented (AS)</p>	<p>Recap of day 1 (SE)</p> <p>Appoint group to prepare press release (ES)</p> <p>Group work</p> <p>Stakeholder Analysis (SE)</p> <p><i>Report back (SE)</i></p> <p align="center">Tea/Coffee break</p> <p><i>Plenary: Problem tree (ES)</i> Identify main threats</p> <p>Group work (ES) Identify causes of main threats building up of Problem tree branches</p>	Excursion to Menagesha Suba Priority Forest	<p>Recap of day 2 (SE)</p> <p>Agreement of Press Release (ES)</p> <p>Plenary session Agree vision, aim and objectives (ES)</p> <p align="center">Coffee/Tea break</p> <p>Group work (ES) Formulate project concepts</p> <p>Develop indicators for the objective(s)</p>	<p>Recap of day 3 (SE)</p> <p>Group work Complete Projects Table (ES)</p> <p>Report back on Projects Table, incl. developing indicators for aim (ES)</p> <p>Tea/Coffee break</p> <p>Plenary session</p> <ul style="list-style-type: none"> Review factors affecting implementation (SE) M&E Plan (SE) Adopt plan (AS) Creation of Species Interest Group's (SIGs) (ES) Next steps (SE) Wrap up (EWNHS) Evaluation (SE)
Lunch break			Lunch break		
1400-1700	<p><i>Group work: gaps in knowledge specific issues (ES)</i></p> <ul style="list-style-type: none"> Population status Local distribution National legislation On-going Projects <p><i>Report back on each of the above (ES)</i></p> <p>Tea/Coffee break</p> <p>Plenary session Factors influencing implementation (SE)</p> <p>Evaluation (SE)</p>	<p>Identify causes of main threats cont.</p> <p>Report back on causes of main threats and complete Problem tree (ES)</p> <p>Tea/Coffee break</p> <p>Plenary Prioritise all threats in problem tree (SE)</p> <p>Evaluation (SE)</p>		<p>Report back and agree on project concepts & indicators (ES)</p> <p>Tea/Coffee break</p> <p>Plenary session</p> <ul style="list-style-type: none"> Review stakeholders analysis (SE) Review issues in Problem tree (SE) <p>Evaluation (ES)</p>	<p>First Meeting of Lappet-faced Vulture Interest Group (AS).</p>

EWNHS=Ethiopian Wildlife and Natural history society, SE=Steven Evans, ES=Eric Sande, AS=Anteneh Shimelis

The Workshop is organised by and hosted by EWNHS, the BirdLife International Partner in Ethiopia and the international coordinator of Lappet-faced Vulture. The species action plans project is co-ordinated, on behalf of the BirdLife International African Species Working Group, by *Nature*Uganda, BirdLife South Africa and the RSPB (the BirdLife Partners in Uganda, South Africa and the UK respectively). The project is supported and implemented by 17 African BirdLife partner organisations and RSPB and co-funded by the UK Department for the Environment, Food and Rural Affairs under the Darwin Initiative

Annex 3: Workshop Participants and their contacts

NAME	ORGANIZATION	POSITION	WHERE BASED	EXPERIENCE IN SPECIES CONSERVATION	Postal address	e-mail
Mark Anderson	Dept. Agriculture, Land Reform, Environment & Conservation	<ul style="list-style-type: none"> ➤ Ornithologist, Principal Nature conservation ➤ Scientist Committee member 	Kimberley, Northern Cape, South Africa	Research, monitoring, Red Data Books, IBAs, Management Plans, Environment Legislation, International Conventions	Private Bag X5018, Kimbale 8300, Northern Cape, South Africa	manderson@grand.ncape.gov.za
Eric Sande	Nature Uganda	African Species Working Group Coordinator	Kampala Uganda	Research on Nahan's Francolin, 5 International SAPs, 3 National SAPs	P.O.Box 27034 Kampala Uganda	eric.sande@natureuganda.org
Houssein Abdillahi Rayaleh	<ul style="list-style-type: none"> ➤ Ministry of Environment Djibouti ➤ Wildlife Protection Organisation 	<ul style="list-style-type: none"> ➤ Assistant to Secretary General ➤ Chair 	Ministry of Environment	Bird data collection, Water bird monitoring, Djibouti francolin preliminary surveys	P.O.Box 1238 Djibouti Fax:+253351618 Tel:(office)+253352667 Mobile:+ 253 829640	assamo@caramail.com
Giti Eric	ABO BirdLife International affiliate in Burundi	Vice Chairman	Bujumbura Burundi	Participated in international action plan workshop for Grauer's Rush Warbler	ABO B.P 7069 Bujumbura, Burundi	
Maria Diekmann	Rare & Endangered Species Trust (REST)	Founder REST	Northern Namibia	Cape Griffon Vulture, Lappet-faced Vulture, Hooded Vulture, Wild dog-farmer work	P.O.Box 178, Otjiwarongo Namibia,9000	awt@iway.na (No attachments Photos)
Nzigiyimpa Leonidas	INECN (National Institution for Environment and conservation)	Chief of the national park of Kibira	Based in Burundi Province of Kayanza locality of Rweguras	Responsible of the protected areas in province Makamda. South of Burundi	INECN, B.P56 Parc National de la Kibira	mzigiyimpal@yahoo.fr PPPkibira@cbinf.com
Wed Abdelatif Ibrahim	Egyptian Natural Conservation Sector M. of Environment	Environmental Researcher	Egypt Damietta	Biodiversity Conservation in PA, Wildlife Conservation workshops, Management plan for PAs, Bird Monitoring	30 Misr-Helwan Agriculture Road, Maachi, Cairo	wedibrahim2002@yahoo.com
Steven Evans	BirdLife South Africa	Species & Sites Conservation Unit Manager	Johannesburg South Africa	Chair ASWG, 3 International SAP workshops, 3 National SAP workshops, EWT- Blue Swallow Working Group, South African White-winged Flufftail action plan	PO Box 515, Randburg South Africa, 2125 89 Republic Road, Ferndale, Randburg	Tel: (011) 789 1122 or 787 0899 Fax + 27 (0) 11 789 5188, iba@birdlife.org.za

Anteneh Shimelis	EWHNS(Ethiopian Wildlife & Natural History Society)	Research Officer	Ethiopia	Research, establishing and training community interest groups	P.O. Box 33611, Addis Ababa Ethiopia	bushcrow@hotmail.com
Lakew Berhanu	Ethiopian Wildlife Conservation Organization	Conservation Biologist	Addis Ababa Ethiopia	SPA on Borena or Sidamo park	P.O. Box 122440 Addis Ababa, Ethiopia	yeabsira93@yahoo.co.uk
Rob Simmons	Ministry of Environment & Tourism	Ornithologist National Biodiversity Programme	Windhoek Namibia	Species Conservation, research on Terns Flamingos, Endemics Cranes, Vultures	Private Bag 13306 Windhoek Namibia	harrier@iafrica.com.na

Annex 4: Participants' workshop expectations

- Action Plan for Lapped-faced Vulture
- An international action plan for the Lapped-faced Vulture
- Learning more about action planning
- Co-operation with participants in future
- See how it is going work for next step and how would be?
- To have enough capacity to preserve our park
- The conservation of all the life in the forest
- Networking knowledge (pop dynamics)
- Lapped-faced Vulture vital to all others eg interbreeding
- Perfect my knowledge in establishing bird species action plan
- To learn more about Lapped-faced Vulture
- To note what kind of actions to set up in priority for conservation of the Lapped-faced Vulture
- To benefit experiences of participants and resultants of workshop to protect the Lapped-faced Vulture and others species in Djibouti
- Network of dedicated people to conserve the species
- Realistic plan
- Participants can use the LF Vulture plan as a model in development of other SAPs
- To see part of Ethiopian Amazing Biodiversity
- Learn of research + conservation of all vultures + raptors (constraints + successes)
- Concrete plans; day to day experience (what works, what doesn't)
- Identify key threats
- Identify conservation actions
- Collaborative institutes
- Put together a realistic + achievable plan to conserve the Lapped Faced Vulture
- Meet new friends
- See at least 5 lifers

Annex 5: Background to the BirdLife Africa Species Working Group (ASWG) and the SAP Project

- ASWG was formed in 1998 by BirdLife International African Partnership with the overall aim is to spearhead species conservation initiatives in Africa on behalf BirdLife International Africa Partnership
- BirdLife International Africa Regional Programme has components on **species, sites, habitats and people**. ASWG is mandated to spearhead the activities under **species** in order to achieve the set targets
- ASWG at present is has a Chair, a Co-ordinator, National Co-ordinator in each of the 17 African BirdLife Partner countries
- One of the roles of ASWG is to fundraise and facilitate the production and implementation of Species Action Plans in Africa
- ASWG with help from the RSPB secured funding in 2001 to implement the Species Action Plans Project (SAP) in Africa which is currently preparing SAPs for priority species in Africa

The Species Action Plan (SAP) Project

- In April 2001, ASWG with help from RSPB started a 3 year SAP Project with the main aim of building capacity in species action planning in Africa
- SAP Project is building the capacity through the production of International and national Action Plans for in priority Species in Africa
- A Species Action Plan is a scientifically authoritative, strategic document that defines specific, measurable objectives and actions for conserving priority species. It should be achievable, time-bound and involve all appropriate stakeholders.
- Cross-border Species were chosen to maximize training across the region eg Spotted Ground Thrush is found in 6 countries, Lappet-faced Vulture in 33 countries in Africa.

The 7 priority species for the SAP project:

Species	Distribution	Coordination	W/Shop date
Blue Swallow <i>Hirundo atrocaerulea</i>	DR Congo, Kenya, Malawi, Mozambique, South Africa, Swaziland, Tanzania, Uganda, Zambia, Zimbabwe	BLSA	Done
White-necked Picathartes <i>Picathartes gymnocephalus</i>	Côte d'Ivoire, Ghana, Guinea, Liberia, Sierra Leone	CSSL	Done
Grey-necked Picathartes <i>P. oreas</i>	Cameroon, Equatorial Guinea, Gabon, Nigeria	CBCS	Done
Grauer's Rush Warbler <i>Bradypterus graueri</i>	Burundi, DR Congo, Rwanda, Uganda	NU	Done
Spotted Ground Thrush <i>Zoothera guttata</i>	DR Congo, Kenya, Malawi, South Africa, Sudan, Tanzania	NK	Done
Lappet-faced Vulture <i>Torgos tracheliotus</i>	Angola, Benin, Botswana, Burkina Faso, Burundi Cameroon, Central African Republic, Chad, DRC, Côte d'Ivoire, Djibouti, Egypt, Equatorial Guinea, Eritrea, Ethiopia, Gambia, Kenya, Malawi, Mali, Mauritania, Mozambique, Namibia, Niger, Nigeria, Rwanda, Senegal, Somalia, S. Africa, Sudan, Tanzania, Uganda Zambia, Zimbabwe	EWNHS	June 03
Houbara Bustard <i>Chlamydotis undulata</i>	Algeria, Egypt, Libya, Morocco, Sudan, Tunisia	AAO	Dec 03

- SAP Project has produced (among other tools) a SAP Format and SAP Process accepted by BirdLife International African Partnership and is now being used as a model in Africa
- SAP Project has provided Training in species conservation in Africa BirdLife Partnership
- SAP Project is providing more training on job to NGOs, Government representatives, specialists in the production of 7 International and 15 National Species Action Plans

- Participants of International SAPs are working hand in hand with ASWG to translate them into National Plans
- SAP Project is funded by UK Darwin Initiative and RSPB with co-funding from African BirdLife Partners and Governments
- Nature Uganda, BirdLife South Africa, RSPB are co-ordinating the implementation of the SAP Project in Africa on behalf of ASWG
- There are National Species Co-ordinators are the focal points for SAP project and species conservation work in general in their respective countries

Annex 6: An explanation of the workshop techniques

(a) Rules for the use of cards during brainstorming

- Only one idea/ concept per card
- Aim for a maximum of 3 lines of text per card
- Write in upper and lower case letters
- Use the card in landscape format; do not use the cards in portrait format
- No discussions until all the cards have been collected and displayed
- Spelling does not matter

(b) Rules for the use of flipchart during brainstorming

- Each person has an opportunity to present his/her idea(s)
- All ideas are recorded onto the flip chart
- All ideas are captured during which time there is no discussion at this stage
- Once all the ideas have been captured, discussion follows

Annex 7: Draft Species Action Plan for the Lappet-faced Vulture *Torgos tracheliotus*

Factfile

English names: Lappet-faced Vulture, Nubian Vulture, King Vulture, and African Eared Vulture

Distribution

- Afrotropical and marginally Palearctic
- Though widespread and not uncommon over considerable areas, has withdrawn from many parts of former range and in others, notably in Sahel and Southern Africa
- Continues to decrease, and rare in western and northern outposts
- Now restricted to Africa and Arabia (Ferguson-Lees & Christie, 2001, BirdLife International (2000). , Brown *et al* 1982, Mundy *et al* 1992).

Habitat

Dry Savannah, thornbush, arid plains, desert with scattered trees in wadis, open mountain slopes.

Size: Γ wing 715-795 (770), E755-825 (782); Γ tail 330-375 (352), E335-360 (350); Γ tarsus 122-150 (146), E134-143 (140); Wing-span, 2580-2660 (2640); wing-loading, 63 N/m²; aspect ratio, 6.8 (Ferguson-Lees & Christie 2001, Brown *et al.* 1982, Mundy *et al* 1992). Weights Γ 5.4-9.4 kg, averaging only 6.2 kg in East Africa (but captive *negevensis* Γ 6.5-9.2 kg, E10.5-13.9 kg) (Ferguson-Lees & Christie, 2001, Mundy *et al* 1992).

Plumage: the Lappet-faced Vulture is a very large majestic bird that has captured the imaginations of a long line of naturalists and explorers because of its colorful appearance and sheer power compelling some to proclaim it as “unquestionably the most beautiful of its genus” (Mundy *et al* 1992). Size wise, it is the largest vulture in Africa and over much of its range in this continent, it is named as King Vulture in connection with its supremacy over other vulture species. The adult bird has long and square wings and in flight looks blackish with white thighs and white bar running across the leading edge of the underwing. Its yellowish horn beak measures 10 cm long and 5 cm deep and it is the most massive bill to be found in the world of birds of prey (Mundy *et al* 1992). The head and neck are bare with variably distinct fleshy folds ('lappets') emerging out of a short and dense ruff that has resulted from the elongated feathers on the sides of the neck (Ferguson-Lees & Christie, 2001, BirdLife International (2000). , Brown *et al.* 1982). It is easy to confuse it with the Hooded Vulture *Necrosyrtes monachus* at long distance and can be distinguished from this by more white below, heavier head and bill (Brown *et al.* 1982)

Voice: almost invariably silent, but occasionally fast high-pitched chatter, amounting to 'shriek' or 'yelp', from either a nesting bird or an individual dominated by another at carcass (Ferguson-Lees & Christie, 2001, BirdLife International (2000). , Brown *et al.* 1982).

Diet: it is mainly a scavenger that primarily devours carrion of varying size (antelopes to elephants or sheep/goat to cattle/camel) chiefly feeding on the dead flesh having an additional capacity to consume sinew, bones and skin that is left uneaten by griffons (Ferguson-Lees & Christie 2001, Brown *et al* 1982, Mundy *et al* 1992). Although the Lappet-faced Vulture has such a wide range of cuisine, analysis of prey remains collected from nests suggested that it has a higher preference for smaller dead animals (gazells, reedbuck, duikers, hares) than griffons do (Brown *et al.* 1982). But such a pattern in feeding preference is not necessarily applicable to all populations, as was shown in Namibia where a more generalized pattern of feeding was observed. Despite being a scavenger of dead animals as a chief foraging strategy, the Lappet-faced Vulture can also kill live animals when the opportunity arises. It is suspected of killing small and weak animals, such as gazelle calves and hares, probably by impact at strike and a powerful lethal grip (Brown *et al* 1982). Where they co-occur, it often raids flamingo colonies and kills both adults and young and eats the eggs as well. As well as the small mammals and reptiles (monitors and other lizards) that it often hunts, it also feeds on locusts and flying termites caught while swarming from holes (Ferguson-Lees & Christie 2001, BirdLife International 2000, Brown *et al* 1982, Mundy *et al* 1992).

1.0 Introduction

The Lappet-faced Vulture is a globally Vulnerable species according to the IUCN/BirdLife threat criteria (C1). It is believed that the species has experienced a more than 25% decline in its population within a period of 10 years or 3 generations (BirdLife International (2000). The proportion of adults in the total population of the species is considered to be less than 10000 and it is experiencing a continuous decline.

It is an Afrotropical and marginally Palearctic and though widespread and not uncommon over considerable areas, but has withdrawn from many parts of former range and in others, notably in Sahel and Southern Africa, continues to decrease, and rare in western and northern outposts. Now restricted to Africa and Arabia where it is found in 41 countries.

2.0 Background Information to the Lappet-faced Vulture

2.1 Taxonomy

Class: *Aves*

Order: *Falconiformes*

Family: *Accipitridae*

Genus: *Torgos*

Species: *tracheliotos*

Races: *A.t. tracheliotos* (Africa), *A. t. negevensis* (Arabia and Israel)

2.2 Geographical Variation

The species is often treated as monotypic, though sometimes *nubicus*, the north-east African population, treated as a separate race for having a browner plumage, partly brownish thighs, pale head and less developed lappets (Ferguson-Lees & Christie 2001, Brown *et al* 1982, Mundy *et al* 1992). However, relatively recent studies had shown that the Arabian populations are more distinct indicating that it is best to treat the species as comprising two races, with *nubicus* representing a somewhat intermediate stage in a cline of decreasing color and contrast from south to northeast (Ferguson-Lees & Christie, 2001). The African race, *A. t. tracheliotos*, is very black, with white thighs and patagial line, bald red head, large lappets and yellow (in south) or black bill while *A. t. negevensis*, the race from the north-eastern extreme of the species range, is altogether browner, including partly brown thighs and brown patagial line, downy greyish and pink head, blackish bill which makes it comparable to retarded immature stage in sub-Saharan Africa (Ferguson-Lees & Christie, 2001, Mundy *et al* 1992). The difference of the two subspecies appears to be more distinct in flight making their identification from below easier (Mundy *et al* 1992). The southern and eastern *tracheliotos* has a strikingly black and white appearance while *negevensis* is uniformly blackish brown with only some individuals showing white markings on the underwing.

2.3 Distribution and Population Status

While the largest chunk of the species range is within the Afro-tropical biogeographic zone, the Lappet-faced Vulture also occupies a relatively smaller expanse at the southwestern edge of the Palearctic region. Although it is still widely distributed and not very rare, its range had shrunk substantially and a continuous declining trend is evident notably in Sahel and southern Africa. It is also uncommon in the western and northern edges of its range (Ferguson-Lees & Christie, 2001).

The species range in Africa encompasses countries along southern Sahara in to Sahel, down through east Africa across the northern-two thirds of southern Africa, but not in the former or existing forest areas of West and Central Africa. It either breeds or is resident in Senegal, Mali, Burkina Faso, Niger, Chad, Sudan, Ethiopia, Somalia, Kenya, Tanzania, Uganda, Rwanda, easternmost DR Congo, Zambia, Malawi, Mozambique, Swaziland, northeast South Africa, Zimbabwe, Botswana and Namibia. The species does also occur in the Gambia, northern parts of Guinea, Cote d'Ivoire, Benin and Central African Republic, as well as southern Angola.

Records show that the species range started to shrink in the 19th century in South Africa where its distribution was wider than today (Mundy *et al* 1992). In that country the species started to retreat from the south and it was never reported from Transkei since 1916 and in the southern and eastern

Cape the last time it was seen was 1966. Currently, there are breeding population of the species in the northern Cape (particularly the Kalahari Gemsbok National Park), the eastern Transvaal lowland (almost the Kruger National Park in its entirety), northern Zululand and eastern Swaziland. In the rest of southern Africa it remains to be widespread.

Except in Somalia where the species is reported only from the northern and southern ends of the country, in the rest of the east African range states it enjoys a widespread distribution (Mundy *et al* 1992). In DRC, it seems to have a presence restricted to the plains of the Virunga National Park on the eastern border of the country. The Vulture is considered common and widespread in Sudan and breeds almost throughout the country. In West Africa low-density occurrences are apparent in countries like Mauritania, Senegal and Cape Verde.

The species is now considered to be extinct in Western Sahara from where it is not reported since 1955. The Atlas Mountains are also scrapped from the geographic range of the species, since in countries like Algeria it might have lasted only until the 1930s and from Morocco there are no more reports of it after the 1972 sighting of two birds. Southern Tunisia, from where it had disappeared no later than 1930 and Israel, where only three birds were remaining until 1994, have now joined the list of former range countries. Currently very small populations are enduring in southeastern Egypt and Mauritania. The Nigerian population has been experiencing a major decline since the 1970s and it is now suspected that the whole population in that country may have been extirpated. Probably, it used to breed in Jordan and there is no evidence suggesting that it still continues to breed in Israel (Ferguson-Lees & Christie, 2001, BirdLife International 2000, Mundy *et al* 1992). In Arabia, it is increasing (or increasingly discovered in 1990s) in interior Saudi, also Yemen, Oman and United Arab Emirates (Ferguson-Lees & Christie, 2001, BirdLife International 2000, Mundy *et al* 1992).

According to some estimates the species has a total population of about 8000 birds in Africa that are scattered within an area of over 8 million square kilometres. This number is projected from estimates of regional totals that suggest the presence of about 1000 pairs (about 3000 individuals) in southern Africa (south of Okavango-Zambezi), 1000 pairs and 1000 immature birds in eastern Africa and about 3000 birds in west Africa and the Sahara. Adding to this, only about 500 birds that occur in the interiors of Saudi Arabia and other small numbers elsewhere in Arabia gives the global total population of the species (Ferguson-Lees & Christie, 2001, BirdLife International (2000).). The distribution of the species across the African continent are shown in Figure 1. Table 1 shows the population status and trends while Table 2 shows local distribution, numbers & protected area status of species' sites within six range states.

Table 1: Population, distribution and seasonal occurrence of Lappet-faced Vulture (Quality code according to the World Bird Database; A = reliable, B = incomplete; C = poor; U = unknown)

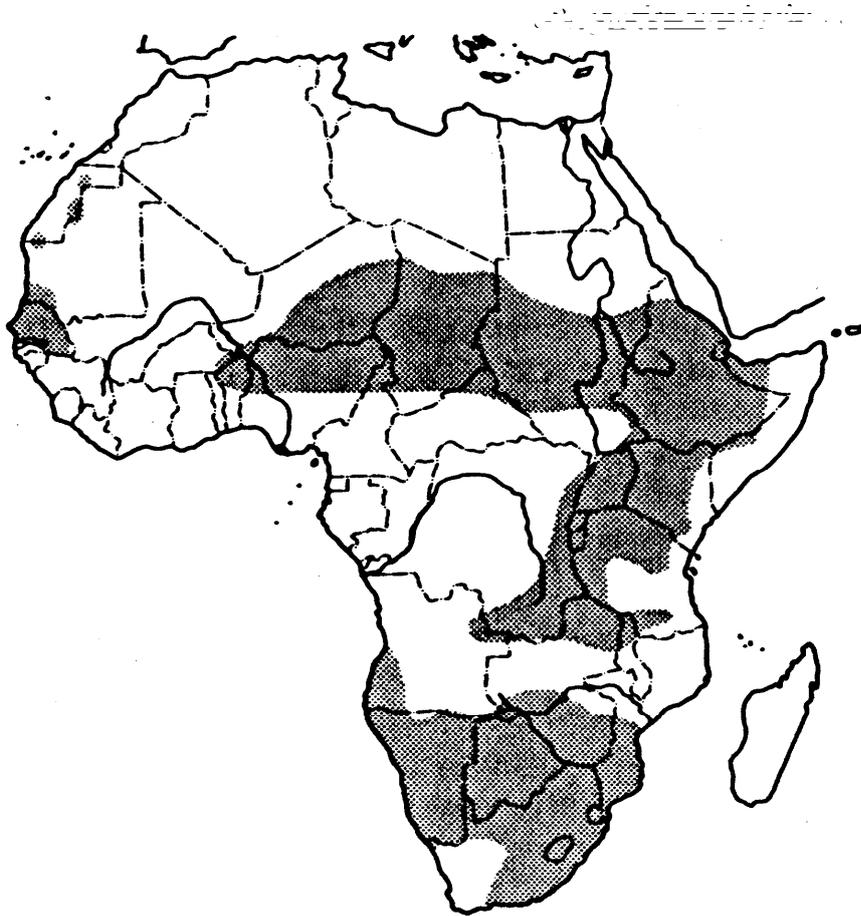
Country	Population*	Distribution	Population trend*	Seasonal occurrence	Notes/Reference
South Africa, Swaziland	150-200 pairs Max 500 individuals (B)	Mainly confined to Cons. Areas = Kruger, Kgalagadi & KwaZulu - Natal and Kalahari (Northern Cape)	Stable, increasing in some areas (Northern Cape) (B)	Resident	Barnes (2000)
Botswana	U	Widespread	Stable (B)	Resident	Boshoff, Anderson & Borello (1997)
Mozambique	U , low numbers	Very localized	Declining (C)	Resident & visitors from Kruger NP & Swaziland	Boshoff, Anderson & Borello (1997)
Zimbabwe	300 pairs (B?)	SE, SW, NW & a long central highlands	Stable (B)	Resident	Boshoff, Anderson & Borello (1997)
Ethiopia	400-500 pairs (C?)	Widespread (most lowlands)	Stable (U)		
Burundi	U	U	U	U	
Egypt	100-200 pairs (B)	South-eastern Egypt Elba PA, Aswan (U.E)	Stable (B)	Resident (breeding)	Irregular surveys
Djibouti	U	Localized IBA no DJ007 & South west of Djibouti border Ethiopia	U	U	Welch & Welch 1992, Djibouti III-Migrant raptor count + 1987
Namibia	500 Pairs	All over densest in Namibia Nankleft and Etashan NP & Water berg plateau park	Suspected 10% decline in last 3 generation	Resident	Simmons & Brown (In prep. Red data book)

**Table 2: Local distribution, numbers & protected area status of Lapped-faced Vulture sites within some range states:
WS=Wildlife Sanctuary, NP=National Park, NR=National Reserve, GR=Game Reserve**

Country	Region/Province	Site IBA no/if applicable	No. of pairs	Protected Area Status	Birds occur, but don't breed	References	Notes
South African	Limpopo	SA001	1	Uhemba Province NR	2	Barnes (1998)	
	Kimpopo/Mpumalanga	ZA 001	40-50	Kruger NP	90-120	Barnes (1998)	
	Northern Cape	ZA 020	6-10	Kalahari-National Gemsbok NP	30	Barnes (1998)	
	Kwa - Zulu	ZA 038	2	Ndumo GR	4-8	Barnes (1998)	
	Kwa- Zulu	ZA 041	2	Pongolo NR	4-14	Barnes (1998)	
	Kwa- Zulu- Natal	ZA 056	2	Itala GR	5-6	Barnes (1998)	
	KwaZulu- Natal	ZA 057	3	Mkuzi GR	6-8	Barnes (1998)	
	KwaZulu - Natal	ZA 044	1	Lake St Lucia GR	2-4	Barnes (1998)	
	KwaZulu - Natal	ZA 060	16-20	Huwuwe umfolozi NP	35-50	Barnes (1998)	
	Swaziland	SZ 002	1-2	Hlanet Mlawula	6	Barnes (1998)	
	Limpopo	ZA 006	0	Water berg system unprotected & NP	2-3	Barnes (1998)	
	Limpopo	SA 009	0	Northern Turf Thonweld	Visitors	Barnes (1998)	
	North West	ZA 017	0	Pilanesburg NP	2-4	Barnes (1998)	
	North West	SA 024	0	Botsalano NR	Visitor	Barnes (1998)	
	North West/ Gauteng	ZA018	0	Magaliesberg & Witwatersberg	Visitor	Barnes (1998)	
	North West	ZA 019	0	Barberspant Leeupan NR	Visitor	Barnes (1998)	
	Northern Cape	ZA 024	0	Kamfers Dam NHS	Visitor	Barnes (1998)	
	Free State & North West	ZA 029	0	Sandveld & Bloemhof Dam NR	1-2	Barnes (1998)	
	KwaZulu - Natal	SA 062	0	Spiorkop NR	Visitors	Barnes (1998)	
Burundi	Bujumbura		1	Rusizi plain	2 indiv Gaugris (1981)		Research needed
Ethiopia	Afar	Y.R NP (070)	NP no gazettelement		20	Mihret/Lakew	

	Oromiya	BMNP (054)	NP, but not Gazetted			Simon Thomsett	
	Oromiya	Abayta Shalla	NP no gazetted			EWNHS	
	Oromiya	Negle plain	IBA not protected			Anteneh	
	Oromiya	Yabello WS	Nominal protection			Anteneh	
	Amhara	Bahir dar	No protection			Anteneh	
	Oromiya	Asebe Teferi				Anteneh	
	Somalia	Erer					
Egypt	North Africa	3 all are (IBAs) 23,17,13		Weak	40	PA Staff	
Namibia	West	NA010 NA019	150	PA & farm land (includes NP)			
	Center	NA006	50	Farmland	?		
	North (including Etrha & W/ban)	NA003 NA004 NA007 NA005	300	PA & Farm land (includes NP)	80		1 site= 52 individuals
Djibouti	NorthWest & South west	Potential IBA No DJ007	1	Unprotected	U	Welch & Welch 1992 Djibouti III-Migrant raptor count 1987	

Figure 1. A map of the range states of the Lappet-faced Vulture (Will be updated by experts)



2.4 Movements

The species is often sedentary, but even adults are nomadic at times. There are some records of dispersal in Chad and West Africa during the rainy season that lasts between June and September (Ferguson-Lees & Christie, 2001, Mundy *et al* 1992). It traverses considerable distances while foraging, as studies on Israeli populations have shown that birds feed in areas located more than 150 km north of their breeding area. The recovery of colour-ringed birds in Namibia desert at distances of 120-700 km and also over 800 km from northeast South Africa to Zambia indicate that immature birds are also dispersive. Vagrants were also recorded in the last 50 years in countries like Morocco, southern Libya, Jordan (possibly bred) and Spain and there are 19th century records of the species from south France (Ferguson-Lees & Christie, 2001, Mundy *et al* 1992).

2.5 Conservation Status

The Lappet-faced Vulture is vulnerable to extinction according to the IUCN/BirdLife threat criteria (C1). It is believed that the species has experienced a more than 25% decline in its population within a period of 10 years or 3 generations (BirdLife International (2000).). The proportion of adults in the total population of the species is considered to be less than 10,000 and it is experiencing a continuous decline.

There is so much concern over the population of the race *negevensis* in Israel which was reduced to only one pair in 1989 (Mundy *et al* 1992). Initiatives that were taken to multiply the subspecies have produced 12 birds in the Tel Aviv University Research zoo. As to the African population, it had experienced drastic declines in Upper Egypt where not more than 10 pairs are thought to survive. It has already gone extinct in Mediterranean countries of North Africa. Fortunately, expeditions have confirmed that the presence of many birds in the Arabian Peninsula and breeding birds are known from near Tayama, at 450 km south-east of Israel's Negev. But concerns are already being shown about the latter population owing to the increased motorized transport in the desert and therefore increased disturbance; also perhaps from the greater use of pesticides on irrigated crops.

In South Africa the species is locally red listed as vulnerable and in Namibia where 11 birds were found poisoned, mainly by strychnine in the early 1980s, the estimated proportion of the species that was considered to be severely at risk was 50% or more. The National legislation and signatories to international conservation treaties relevant to Lappet-faced Vulture in range 7 range states is shown in table 3.

Table 3: National legislation and signatories to international conservation treaties relevant to Lappet-faced Vulture range states

Country	National legislation	Cites	CBD	CMS	UNESCO Man & Biosphere	African Convention	World Heritage Convention
Burundi	<ul style="list-style-type: none"> • Legislation on PAS (1980) • Environment code. • NBSAP 	X	X	In Process	X	?	?
Ethiopia	No for birds. Yet	X	X	?	X	X	X
South Africa	<ul style="list-style-type: none"> • Biodiversity Bill. • PA bill • NEMA • Provincial Proclamations 	X	X	X	X	X	X
Djibouti	<ul style="list-style-type: none"> • Law for Potential site for protected area in process • Biodiversity protection Law in process 	X	X	In Process	-	-	-
Namibia	Pending new Agenda	X	X	-	?	?	-
Egypt	<ul style="list-style-type: none"> • Law 53/66 • 4/94 • 102/83 	X	X	X	-	?	?
Uganda	<ul style="list-style-type: none"> • Uganda Wildlife statute 1995 • Protected species Act 	X	X	X	X	X	X

2.6 Relationship with other SAPs and biodiversity strategies

National Biodiversity Strategies and Action Plans and National IBA Conservation Strategies are relevant to this SAP.

2.7 Ecology

General habits

Although many consider the species to be solitary under normal conditions, some authorities claim a bird spends only the first three months of the breeding cycle unaccompanied by its partner and it is more common to see adult birds in pairs than singly for the remaining part of the year (Mundy *et al* 1992). The number of birds often seen at carcasses does not exceed 10, although at some exceptional places like the sub-desert areas of Namibia, Somalia, and Northern Chad where the species is relatively common, it is possible to see up to 50 individuals at large food sources or water holes (Ferguson-Lees & Christie, 2001, Brown *et al* 1982, Mundy *et al* 1992). The flight by pair-members in unison is attributed more to territoriality than courtship, which is almost unknown in the species. It pairs up with White-headed Vulture *A. occipitalis* at carcasses, although it is much powerful and aggressive (Brown *et al* 1982). It habitually roosts on trees in open plains and a pair often stay close to each other on the same or adjacent trees, sometimes for many successive nights. It is unable to fly far without thermal currents in a flat country and in mountainous country like Ethiopia it can easily ride up draughts to attain great heights.

It arrives at carcasses usually latter than other vultures, but at times it is the first to break in to a carcass causing heavy sideways blows with its powerful bill. A bird does not start to feed immediately up on arrival at a carcasses preferring to stand around for much of the time before suddenly plunging itself in to the swarm of other vulture species that it scatter fiercely (Mundy *et al* 1992) Although it can dominate all other species, it can readily be robbed by, for instance, jackals. Unless it is very hungry, the Lappet-faced Vulture seldom joins a struggling throng of foraging griffons and when it does, it forces its way in to a crowd of vultures scattering them to get access to the food. When it is feeding alone its powerful head and bill enables it to eat tough sinews, dry skin, small bones not utilized by griffons.

Analysis of pellet remains collected from nests have shown that most of the food that was brought to the nestling came from small animals suggesting that predation might also be a foraging strategy adopted by the species (Mundy *et al* 1992). The analyzed remains belonged to monitor lizards (leguaans), birds, hares, Pangolin, Steenbok, Grey Duiker, goat, rodents (including porcupine), jackal, polecat, African Civet and Mongoose in southern Africa; and hare, jackal, and bird remains were found in Serengeti. Although authorities believe that the lappet-faced vulture is equipped with very strong feet to clinch a small prey and a very heavy bill to tear it apart with, there was never a satisfactory eye witness account of the species killing any animal of whatever size (Mundy *et al* 1992). The size of the pellets which is as large as a man's fist comprises matted dry hair and it some times have hooves entwined to it. Some of the remains that were collected from the birds nest were quite huge and indicate the capacity of the species to swallow large pieces at one go. Mundy *et al* 1992, found a duckier sized leg, but the record is the "complete front leg of a Thompson's Gazelle" in a Serengeti nest. Since there has never been any record of the species carrying items in its feet, it was presumed that the bird either had swallowed these legs or carried them in its bill. Authorities are not convinced that the birds crop is capable of carrying more than a kilogram at a time in spite of a reported 3 kg being found in one birds stomach. However, a bird that was "too heavy to fly" was captured in the Kalahari Gemsbok National Park and regurgitated a mass of meat and Springbok skin that weighed 1.45 kg. Such a proportion of a smallish crop on a large bird that limits the amount of food to be carried suggests a bird requires to eat almost daily which makes predation a more suitable strategy than either piracy or scavenging. But observations at carcasses had recorded an adult stuffing its crop full in just 27 minutes and three immatures almost filled theirs in less than 20 minutes. In another instance, six birds fed vigorously for an average of 45 minutes and none had a crop that was swollen. Generally, the bird requires an average of 400 g and 500 g food per day, or about 6.5% of the adults' average body weight.

Habitat requirement

The species typically inhabits dry savanna, thronbbush, arid plains, desert habitats with scattered trees in wadis and open mountain slopes with varying altitude ranging from sea level up to 4,500 m (Ferguson-Lees & Christie 2001, BirdLife International (2000). , Brown *et al* 1982). Although it is rarely seen foraging either in dense woodlands or disturbed (e.g. roadsides) habitats, the species likes better undisturbed open country with some trees where there is little or no grass (Ferguson-Lees & Christie 2001, BirdLife International 2000, Brown *et al* 1982).

Trees are the most important components of the species habitat because they are needed for roosting and nesting. Birds almost exclusively roost on trees and even those that linger at a water hole until late in the afternoon never spend the night on the ground (Mundy *et al* 1992). Nests are also built on top of high trees showing especial preference to thorny species of *Accacia*, *Blanaites*, and *Termilania* but also sometimes uses other tree types like broad-leaved figs and cedar *Juniperus procera* (Brown *et al* 1982).

Breeding habits

The Lappet-faced Vulture builds solitary nests that are normally dispersed in individual territories sprinkled at greater distances (Brown *et al.* 1982). For instance, in Serengeti nets are built 4.16 km apart from each other on the average and studies from Zimbabwe showed that the mean distance between nests was 3.2 km. This suggests that a pair's minimum home range is 8 km² and this can expand up to 15 km² in an optimum habitat. Although a total range of 43 km² was recorded in Serengeti, the species probably confines its foraging activities within the limits of its home range not traversing long distances like griffons. Such a pattern of building solitary nests in 'lonely' territories is the commonest habit that is widely accepted to be applicable to all members of the species, but there are some exceptions. In countries like Chad, where the species is abundant, nests are built very close to each other as was the case of one reported instance in which several nests were assembled on a single tree together with active nests belonging to the White-backed Vulture *Gyps africanus* (Brown *et al* 1982).

The Lappet-faced Vulture builds huge flat nests that are completely open to the sun placing them mostly on top of acacia trees at any height from 3 to 15 ms (Ferguson-Lees & Christie 2001, Brown *et al* 1982). If measured at the rim, the dimension between two diametric outer most points of a nest is 120-220 cm and this can reach up to 300 cm in some instances. The vertical thickness of a nest is 30-100 cm, but it gets thinner at the center where there is a shallow bottom depression with a crosswise breadth of 100 cm. A bird builds its nest from sticks lining the inside part with dry grass before carpeting it with hair and skin gleaned from carcasses (Ferguson-Lees & Christie 2001, Brown *et al* 1982).

Pairs often build only one nest, but it is also normal to have 1-3 nets that are used alternately. A nest is used year after year, often for many years, unless the foundation on which it was built on is unstable, in which case it collapses and deserted. In some cases branches growing around a nest may make it inaccessible for pairs instigating desertion. The birds repair an old nest by placing few sticks round the rim and relining it with fresh grass in courtship periods. One or both birds usually roost in or beside a nest some times for as long as the whole year and such a habit is practiced more regularly with the approach of the laying date.

Probably attributable to the immense variability in position, landscape and climate across the species huge geographic range the different sub-populations start and finish their breeding activities at different times of the year. Birds in East Africa breed throughout the year while May-January is the season of procreation for those occurring in Southern Africa and those that are found in the extreme north of the species range, start to breed in November finishing it in July/September (Ferguson-Lees & Christie, 2001). The following is a list of breeding dates for a number of range states:

- S Tunisia, N Sahara-March
- Senegal- January-February
- Mali-December
- Chad- November-February

- Ethiopia and Somalia- October-late February
- N Uganda, W Kenya- May, June, September-November
- E Kenya, N Tanzania-May, July, August-October
- Serengeti, Tanzania, S Kenya- January-June
- Zimbabwe-May-June, Namibia-May-August.

The normal clutch is one egg, although at times birds lay up to two eggs and spend 54-56 days incubating them (Ferguson-Lees & Christie, 2001, BirdLife International 2000. Mundy *et al* 1992). Amongst four clutches that were measured for egg size, the eggs found in two of them had very similar sizes suggesting that both have been laid by the same female (Mundy *et al* 1992). The egg is a broad oval object with a dull white background that is spotted and blotched brown (Brown *et al* 1982). Measurements from 85 eggs in Africa yielded an average of 92.6 \pm 70.6 mm (Mundy *et al* 1992) with a range that was 82.8-104.5 \pm 65.7-78.6. The estimated fresh weight of eight eggs from Zimbabwe was 266 g (range 235-318 g), which is about 4% of the female's body weight. At the start the females spend sometime in an incubation posture without having an egg underneath them. Although both sexes participate in the incubation process, the proportion of time that each of them spend for this purpose is not yet determined due to the difficulty of distinguishing the sexes using natural morphologic features. An incubating adult rarely receives a relief from the 'tedious' task of sitting very tightly on its egg possibly to protect it either from the sun or predators, and at such times the bird does not disrupt such an exertion unless disturbed by an intruder determined to reach its nest (Brown *et al* 1982). After 53 \pm 1 days of incubation, an egg hatches in to a chick taking 125-135 days to fully fledge at the rate of c.0.4 young/pair/year (Brown *et al* 1982, BirdLife International 2000). A bird may incubate addled eggs for a period of 100 days or more and if it has lost an egg at an early stage of incubation it lays a replacement egg in another nest (Brown *et al* 1982). A complete nesting cycle, that starts with the laying of an egg and culminates with the first flight of a fledged chick, takes c. 185 days. During the first 20 days of brooding, parental care is at its pick and it declines with the progress of the chick towards adulthood. According to some authorities, parents continue to shelter their young for as long as 12 months or more (Ferguson-Lees & Christie 2001) and there are some others who shorten this period by about six months (Brown *et al* 1982). Instead of starting to breed in the immediacy of their independence from their parents, young birds wait until they reach at least six years of age (BirdLife International (2000).). Nest failures are attributed to collapse of nests, stealing of eggs by humans and predation of young in nests built on low trees (Brown *et al* 1982). Remarkably though, there is a record of a Lappet-faced Vulture hatching and rearing a White-headed Vulture in the wild (Ferguson-Lees & Christine 1982).

Studies that monitored breeding success in four African National Parks had come up with remarkably similar breeding success rates that were between 40 % and 50 % (Mundy *et al* 1992). It was thought that a total of 123 young birds were successfully reared from 277 pair-years at a 44% success rate. Because it is highly probable that these studies had not included all the birds resident in the areas, 40 % success rate (0.4 young/pair/year) was considered as a realistic average figure. Although some authorities claim that the long breeding cycle does not permit pairs to breed every year, Mundy *et al* 1992 be of the opinion that a pair would try and breed annually provided that other factors such as food and climate remained at their optimum.

2.8 Threats

Nest destruction (◆◆◆), reduced food availability (◆◆◆), electrocution (◆◆◆) and inadvertent poisoning (◆◆◆◆) were identified as the major threats to the Lappet-faced Vulture. All the threats/issues and their causes in the a cause-effect relationship that ultimately lead to the low population of the lappet-faced Vulture are shown in the Problem Tree (Figure 2).

Figure 2: The problem tree (to be inserted)

2.9 Stakeholder analysis

The main stakeholders that were identified were government ministries/departments, conservation NGOs, farmers/land owners and local communities. The detailed analysis on how the different stakeholders impact on the species is shown in Table 4

Table 4 Stakeholders analysis

Country	Stakeholder	Interest	Activities	Imp	Intensity	Proposed Activities
Djibouti	Environment Department	Environment protection, Law Enforcement, Biodiversity	Research	+	*	Protected Areas
			Project Management	+	*	Research
			Draw Environment. Strategy, Low project	+	*	Public Awareness
	Agriculture Dept.	Agriculture, Fishers	Research	+/-	*	Water adduction
			Water supplying	+/-	**	Fisheries development
			Law Enforcement	-	*	
	Conservation NGO	Local develop, Biodiversity	Research	+	*	Surveys on Biodiversity
			Public awareness	+	*	Local develop
	Military local & foreign bases French & USA	Military activities, Training	Military training	-	***	The localization of military activities
			Disturbance	-	***	Several zones
Burundi	Wildlife Authorities & Public Administration	Conserve the species	Manage Protected Areas	+	*	To perfect low application in conservation
			Keep respect Conservation legislations			To be trained and informed in species conservation
	Experts & Scientist	Collection of data, Research	Research activities & field work	+	**	Monitor of the species and his habitat
						Train other people
	Donors and NGOs	Conservation work	Giving money and implement the action plan	+	**	Continuing to secure fund
						Lobbing and advocacy for conservation of this species
Local community & Farmers	Crop and farming livestock	Destroying sp habitat	-	***	Adapt a participatory process for conservation this species	
Medias	Increase public awareness on conservation status	Collection information and publicise it in the news (radio, Newspaper, TV)	+	**	Continuing publicity on this species	

Ethiopia	EWCO	Conservation	PA Management	+	★★★★	Strengthen current act (include Lappet-faced Vulture action plan in their annual plan)
	Regional Environmental Bureau	Conservation	PA & UA Management	+	★★★	Strengthen current act (include Lappet-faced Vulture SAP in their annual Plan)
	EWNHS	Conservation	Biodiversity research	+	★★★★	Strengthen current act (include Lappet-faced Vulture SAP in their annual Plan)
			Site Conservation			
			Awareness			
	EWCP	Conservation	Ethiopian wolf conservation & the Ecosystem they are part to	+	*	Include Lappet-faced Vulture monitoring in their activities
	National Parks and Reserves	Conservation	PA Mange.	+	★★★	Strengthen current activity and include Lappet-faced Vulture SAP
	Tour operators	Tourism	Organize wildlife safari & Hunting	+ -	*	Reduce distribute, don't kill spp. pre, eco-tourism give money to implement SAP
	Local community	Live hood	Animal husbandry, farming, fuel collection grass cutting etc	- +	★★★★	Strengthen traditional NRM, make activities sustainable back alternatives
	IBCR	Conservation	Research, presentation genetic mat.	+	★★	Strengthen current act and include SAP in their plans
	EPA	Conservation	Policy, Research, legislation, Environmental Impact Assessment	+	★★	Strengthen current act and include SAP
	AERO	Agriculture & Conservation	Research	- / +	*	➤ Strengthen current activities consider spp. ➤ In implementation Agric. devt.
	Media	News	Broadcasting	+ / -	★★★	Strengthen positive sides
	International donors	Conservation & Development	Funding & donation	+ / -	★★★★	Strengthen positive sides
Military	War (Defence)	Training & Patrolling (cut lots of trees)	-	★★★	Relocate (move alternative fuel)	
Mining Industry	Money	Up stream poisoning	-	★★	Pay for cleaning up rivers	
Electric Power Authority	Electricity	Electrification	-	★★	Environmental Impact Assessment & take mitigating actions	
Farmers	Killing (problem) animals	Poisoning	-	★★	Seek safe alternatives	

Namibia	Farmers	Habitat Controllers	Land mange	- / +	*****	Responsible use of poison
			Modification	- / +	*****	<ul style="list-style-type: none"> ➤ Appropriate Land management Vulture- Friendly actions (Restaurant drowning pre ➤ Hands-Off vulture monitoring
	Govt (M.E.T, AGRIC, Vet Service, Forestry)	Research, Monitoring, legislation, poison, administrating	Population /Breeding	+	***	Continue current activities
			Assessment & Conservation	+	**	Continue current activities
			Permits & law enforcement	+	*	Continue current activities
			Control	+	*****	Tighten control
	NGO (REST VSG, NARREC Wildlife Soc.	Vulture Welfare	Awareness	+	***	Do more
			Research	+	**	
			Monitoring	+	***	
	Traditional healers	Vulture parts	Kill disturb (Not so much Lappet-faced Vulture	-	*	NGO provide parts/ sustainable permits for healers
	Egg collectors	Collecting eggs	Distributing breed disrupt	-	*	STOP!
	Tour Operator	Make money	Vulture restaurant	+ / -	*	Directory of vulture restaurants by NGO impact
Low flying			-	***	Change air route, or prevent flights at egg lay seasons	
View nest disturb			-	***	Stop & enforce penalties	
South Africa	Department of Environment Affairs & Tourism	Legislation, conservation, Tourism	New policy & Legislation	+	*****	Delegation to provinces.
						Better communication with provinces
						Provision of funding to provinces.
						Development of National frameworks E.g NESAP.
	Work more closely with NGOs					
	Provincial Conservation Awareness	Biodiversity Conservation	Low enforcement	+	**	Need to develop strategies for species conservation
			Awareness and EE	+	*	Improved collaboration with provinces
Research & Monitoring			+	**		

		Protected Area Network maintenance & development	+	***	
NGO's (USG/EWT/PWG/BLSA/WESSA/ WWF)	Biodiversity Conservation	Awareness	+	***	Improved co-operation between NGOs.
	Tourism	Training	+	**	Involve more non-professionals in cons. work
	General Environmental Issues	Research & Monitoring	+	***	
Eco-tourism		+	**		
ESKOM	Provision of electricity	Power lines for power distribution.	-	*****	All power lines to be made raptor-friendly.
		Funding for conservation projects			Mitigation of existing bird unfriendly structures
		Mitigation of power lines	+	**	Monitoring
+	**				
AVCASA	Promote effective & safe use of pesticides	Pesticide use/ Production and distribution for problem animal control	-	*****	Awareness
					Remove harmful pesticides from use
					Enforce appropriate use of pesticides
Private Land owners	Livestock farming	Problem animal control.	-	***	Selective problem animal control techniques (non-harmful)
		Direct persecution of vultures.	-	*	Awareness in order to stop direct persecution of vultures
		Depletion of vulture food supply (veld mismanagement)	-	*	Holistic resource management.
		Disturbance at nest sites	-	*	Ladders & others reservoir mitigation measures.
		Farm dams	-	*	Environmental Impact Assessments
		Removal of trees	-	**	Alternative wood supply
Traditional Healers	Health of the nation	Use various methods to acquire vulture body parts	-	**	Alternatives
					Obtain vultures that die of natural & other causes
					Quotas for sustainable off take

	Sasolt other corporate funders	Variety	Provision of financial support to projects	+	***	More money for more projects
		Varied	Publicity + Sell more of their products.			
Egypt	Nature conservation Sector	Conservation, Legislations, Awareness	Habitat protection & Species in PAs	+	***	Training/ Monitoring support with facilities Cooperation with stock
	Ministry of Agriculture	Conservation	Land Reclamation	-	****	Environmental Impact assessment forth proposed project Central pesticide use
	Ministry of Interior and ministry of Defence	Law enforcement	Limited support Hunting	-	**	Training Involvement
	Ministry of tourism	Eco- Tourism	Safari & sport Hunting	-	***	Awareness program
			Bird watching	+	***	Co-ordination with natural conservation sector
	Universities	Participation in species conservation	Researches Technical support	+	***	Intensive researches Protect area staff training
	Local communities	Involvement in Implementation of Action planning	Hunting, trees cutting, disturbance	-	****	Increase public awareness Find incentives alternative Law enforcement
	NGOs & Private sectors	Participation in conservation	Help in habitat protection	+	**	Awareness program Training

3.0 Action Programme

This includes the vision, aim, immediate objectives, specific objectives and projects/activities of the action plan. The vision, aim, immediate objectives and specific objectives are indicated in Table 5.

Table 5: Vision Aim and Objectives

Vision	Description and justification	Indicators
Self sustaining, healthy population of Lappet-faced Vulture across the entire range		
Aim (5 years)	Description and justification	Indicators
Initiative implemented to address the threats necessary to stabilise and increase Lappet-faced Vulture populations across their range		
Immediate Objectives	Description and justification	Indicators
1.0 Increase artificially lowered productivity of Lappet-faced Vulture (****)		
2.0 Reduce un naturally high Adult/ Juvenile mortality of Lappet-faced Vulture (***)		
3.0 Improve geographic knowledge of Lappet-faced Vulture (****)		
Specific objectives	Description and justification	Indicators
1.1 Improve knowledge on the occurrence/ distribution & population dynamics of Lappet-faced Vulture (****)		
2.1 Reduce nest predation		
2.2 Reduce nest disturbance & predation (***)		
2.3 Reduce calcium deficiency		
3.1 Reduce Lappet-faced Vulture electrocutions & collisions (***)		<ul style="list-style-type: none"> ➤ Increase in number of modified power lines that are Vulture friendly ➤ Reduction in number of electrocutions in IBAs that contain a high density of Lappet-faced Vulture
3.2 Reduce Lappet-faced Vulture drowning (**)		
3.3 Reduce Lappet-faced Vulture Poisoning (****)		
3.4 Reduce intentional killing of Lappet-faced Vulture (**)		
3.5 Reduce Food shortage for Lappet-faced Vulture (***)		

(****: critical, ***: high, **: medium, *: low)

Projects

Projects are what need to be done to achieve the different objectives. They are numbered according to the corresponding specific objectives which are also numbered according to the corresponding immediate objective.

1.1 Improve knowledge on the occurrence/distribution & population dynamics of Lappet-faced Vulture (**)**

- 1.1.1 Initiate At lasing of all Raptor/ vulture population
- 1.1.2 Assess population size/ trend & age ratios.
- 1.1.3 Assess breeding success & mortality factors using ringing proc
- 1.1.4 Assess habitat & food requirements of Lappet-faced Vulture
- 1.1.5 Training in Raptor conservation in general & Lappet-faced Vulture in particular
- 1.1.6 Capacity building among incipient, current & future researchers to do better research Monitoring
- 1.1.7 Improve networking, coordination & fundraising for vulture conservation in Africa.

2.1 Reduce nest predation (*)**

- 2.1.1 Identify important nesting areas
- 2.1.2 Increase awareness among the community
- 2.1.3 Assist the formulation of implantation of appropriate legislation e.g Environmental Impact Assessment process
- 2.1.4 Continuously monitor success of awareness i.e. no trees remaining /
- 2.1.5 Seek alternatives where conflict occurs between local community resource use of Lappet-faced Vulture needs

2.2 Reduce nest disturbance (*)**

- 2.2.1 Research to identify whether nest disturbance is a cause of low productivity
- 2.2.2 Awareness Campaign to Reduce ness disturbance directed at eco-tourism, local communities & developers all stakeholders
- 2.2.3 If food availability is identified as the main cause of low parental attendance leading to nest production establish Vulture Restaurants/ vulture feeding site/ encourage farmers to leave carcasses in field.
- 2.2.4 Lobby for establishment of PAs for Lappet-faced Vulture core areas i.e. (areas viable population of Lappet-faced Vulture)
- 2.2.5 Lobby governments /stakeholders to establish settlement schemes, forestry plantations, etc

2.3 Reduce Calcium deficiency effects (*)

- 2.3.1 Provide bone fragments at feeding sites/Vulture restaurants and other feeding areas
- 2.3.2 Conduct Research on effects of Calcium deficiencies in Lappet-faced Vulture populations

3.1 Reduce Lappet-faced Vulture electrocutions & collusion (**)**

- 3.1.1 Make utilities in Africa aware about hazardous Pylon designs & suitable mitigation measures
- 3.1.2 Get information about reasons, frequency distribution of Lappet-faced Vulture electrocutions & collusions by power lines

3.2 Reduce Lappet-faced Vulture drowning ()**

- 3.2.1 Make farmers aware about suitable reservoir & drinking troth modification methods & implication of drowning for Vulture Conservation & reservation water quality

3.3 Reduce Lappet-faced Vulture Poisoning (**)**

- 3.3.1 Promote awareness about selective predators control techniques of improved livestock management methods amongst all stakeholders.
- 3.3.2 Collect information about legislation policy related to the use of poisons/ Pesticides and where appropriate react legislation against the incorrect sue of poison & pesticides
- 3.3.3 Get information about the relative impact of poisons at Lappet-faced Vulture population across in range

- 3.3.4 Assess the extent of use of impact on vulture of NSAIDS in Africa
- 3.3.5 To gather baseline information about the potential lead impact on Vultures in Africa

3.4 Reduce Internal killing of Lappet-faced Vulture ()**

- 3.4.1 Through awareness, change the negative perception about the feeding habits of Lappet-faced Vulture & other scavenging birds.
- 3.4.2 Gather information about the extent of use of Vultures for traditional medicinal purposes (reasons alternatives, selective sources)
- 3.4.3 Get information about the proportion of domestic livestock killed in diet of Lappet-faced Vulture throughout its range of disseminate this information to all stakeholders
- 3.4.4 Enact legislation against deliberate killing of Lappet-faced Vulture except in specific circumstance (e.g. under permits)

3.5 Reduce food shortages for Lappet-faced Vulture (*)**

- 3.5.1 Provide information of support to relevant authorities of organisations on land use impacts in relations to Lappet-faced Vulture
- 3.5.2 Ensure appropriate Environmental Impact Assessment process for Lappet-faced Vulture of other scavenging birds is done for all major developments
- 3.5.3 Encourage vulture feeding sites learning natural deaths carcass in the field

Table 6 shows the details of how the specific project will be implemented i.e., its priority as far as the conservation of the species is concerned, agencies that will take a lead to implement the project, time scale, cost risks and opportunities that one has to bear in mind.

Table 6: Projects Table

	Project	Overall Priority	Agencies responsible	Time scale	Cost	Risks and opportunities
	A) Policy and Legislation					
2.2.5	Lobby governments /stakeholders to establish settlement schemes, forestry plantations, etc	**	National NGOs, Governments,	July 2003-July 2005	*	Governments may not cooperate (R)
2.1.3	Assist the formulation of implantation of appropriate legislation e.g Environmental Impact Assessment process	****	National NGO & Responsible Govt Dept	On going	**	Lack of governments cooperation (R)
2.1.5	Seek alternatives where conflict occurs between local community resource use of Lappet-faced Vulture weds	**	NGO	July 2003-July 2005	*	
3.3.2	Collect information about legislation policy related to the use of poisons/ Pesticides and where appropriate enact legislation against the incorrect sue of poison & pesticides	***	NVG, PWG	Jan 04- 31 Dec 03	*	-Long time frames for development of legislation (R) -Lack of government cooperation (R)
3.4.4	Enact legislation against deliberate killing of Lappet-faced Vulture except in specific circumstance (e.g. under permits)	***	Government, NGOs	July 2006- July 2008	***	Governments may not cooperate (R)
3.5.2	Ensure appropriate Environmental Impact Assessment process for Lappet-faced Vulture of other scavenging birds is dove for all major developments	*	Government, NGOs	Jan 04- 31 Dec 08	**	-Corruption (R) -Inadequate Environmental Impact Assessment process (R)
	B) Species & habitat					
2.1.1	Identify important nesting areas	****	Government, Universities & NGOs	July 2003-July 2005	***	
2.2.3	Establish Vulture Restaurants/ vulture feeding site/ encourage farmers to leave carcasses in field	* ****	NGO & Government Departs.	Sep 2003- on going	*	
2.2.4	Lobby for establishment of PAs for Lappet-faced Vulture core areas i.e. (areas viable population of Lappet-faced Vulture)	*	NGO & Government Departs.	July 2006- July 2008	*	
3.4.3	Get information about the proportion of domestic livestock killed in diet of LFV throughout its range of disseminate this information to all stakeholders	*	NVG, Conservation NGOs	Jan 04- 31 Dec 08	*	-Lack of farmer knowledge /or cooperation (R)
C	C) Monitoring & Research					
1.1.1	Initiate atlasng of all Raptor/Vulture population	***	NGO, Universities, Govt. Public	July 2006- July 2006	**	
1.1.2	Assess population size/ trend & age ratios	***	Universities & Government. Research Section	July 2006- July 2008	**	
1.1.3	Assess breeding success & mortality factors using ringing programmes	** *	Universities, Govt. Research Dept & NGO	July 2006- July 2008	***	
1.1.4	Assess habitat & food requirements of Lappet-faced Vulture	** *	Universities & Govt. Research	August 2003- Aug. 2008	***	
2.1.4	Continuously monitor success of awareness i.e. no trees	****	NGO & Universities	2006-2008	**	-The Project does not star in

	remaining					the planned time (R) -The time planned is not enough (R)
2.2.1	Research to identify whether nest disturbance is a cause of low productivity	*	Universities & Govt. Departs.	July 2006-July 2008	**	
2.3.2	Conduct Research on effects of Calcium deficiencies in Lappet-faced Vulture populations on population	*	Universities & Govt. Departs.	July 2006-July 2008		
3.1.2	Make farmers aware about suitable reservoir & drinking trough modification methods & implication of drowning for Vulture Conservation & reservation water quality	***	Conservation NGOs & Governments, NVG	Jan 04-31 Dec 06	**	-S. Africa study conducted (O) -Mitigation measures known (O) -Resource material developed (O)
3.3.3	Get information about the relative impact of poisons at Lappet-faced Vulture population across in range	***	NVG, PWG, Cons. NGOs & Governments	Jan 04-Dec 2006	**	-Information not shared (R) -PWG in place
3.3.4	Assess the extent of use of impact on vulture of NSAIDS in Africa	***	Conservation NGOs & Government, VSG, The Peregrine Fund	Jul 03-30 Jun 04	**	-Time (R) -Asian vulture crisis (O) -Current knowledge in S. Asia (O)
3.3.5	To gather baseline information about the potential lead impact on Vultures in Africa	*	Conservation NGOs & Government, VSG	July 2003-Dec 2008	*	-Information not shared (R) -California Codor Project (O)
	D) Public awareness and Training					
1.1.5	Training in Raptor conservation in general & Lappet-faced Vulture in particular	***	NGO & Govt. Dept	Aug 2003-Aug 2004	*	
1.1.6	Capacity building among incipient & current & future researches to do better research & months	***	International NGOs & NVG	August 2003-on going	***	
1.1.7	Networking, co-ordinating body & fund raising	****	International NGO and National NGO	Nov 2004 (PAOC11-VSG to discuss)	*	
2.2.2	Awareness campaign to reduce nest disturbance directed at eco-tourism, local communities & developers all stakeholders	**	NGO & Govt. Dept	July 2005-on going	**	
2.1.2	Increase awareness among the community (all stakeholders) to reduce nest disturbance	***	NGO & Govt. Dept	Jan 2006-ongoing	***	
3.1.1	Make utilities in Africa aware about hazardous Pylon designs & suitable mitigation measures	***	IBEC, Eskim EWT Partnership, NVG	Jan 2004-Dec 2005	*	IBEC in place, EWT Partnership
3.2.1	Make farmers aware about suitable reservoir & drinking trough modification methods & implication of drowning for Vulture Conservation & reservation water quality	***	Conservation NGOs, Government, NVG	Jul 03- 30 Jan 2007	***	-S. African Study concluded -Mitigation measures known Resource material available
3.3.1	Promote awareness about selective predators control techniques of improved livestock management methods amongst all	***	Conservation NGOs & government, PWG	Jul 03- 30 Jan 2007	***	-Accessible, cheap, easy effective (R)

	stakeholders					-PWG in place (O) -Knowledge (O) -Resource materials (O)
3.4.1	Awareness about negative perception on Lappet-faced Vulture feeding habits	***	Conservation NGOs, Government, VSG, NVG	Jan 04-31 Dec 2008	*	
3.5.1	Provide information of support to relevant authorities of organisations on land use impacts in relations to Lappet-faced Vulture	***	Conservation NGOs, Government VSG, NVG	Jan 04-31 Dec 2008	*	Too many role plays (R)
E) Community involvement						
2.1.5	Seek alternatives where conflict occurs between local community resource use of Lappet-faced Vulture	**	LG, Community leaders & NGO	July 2003-on going	**	
2.3.1	Provide bone fragments at feeding sites/Vulture restaurants and other feeding areas	*	LG, Community leaders & NGO	July 2003-on going	*	
3.5.3	Encourage vulture feeding sites leaving natural deaths carcase in the field	**	LG, Community leaders & NGO	July 2003-on going	**	

NVG=New Vulture Group, VSG=Vulture Study Group, PWG=Poison Working Group, LG=Local government

There are a number of factors that may affect the implementation of the action plan. The on-going projects in countries (Table 7) may enhance the implementation on the plan in one way or another.

Taking into account the regional differences, the risks and opportunities in the implementation of the plan are shown in Table 8.

Table 7: Factors affecting action plan implementation

Risks	Opportunities
<ul style="list-style-type: none"> • Lack of stakeholder participation and coordination • Lack of funds • Financial support • Inaccessibility for staff to implement the AP in the area • Distance from decision centre to area to implement the AP • Conflict in the region of the Kibira national Park (Burundi) • Lack or scanty information • Lack of knowledge on Lappet-faced Vulture • Lack of trans-boundary Pas in the region • Identified problem change (not accounted for in Plan) • Low level of awareness at all levels • Cultural traditions • Problem animals • Generation time for change in farming attitude • Local community awareness • Lack of professionals or personnel to do the job • Lack of human resources • Lack of bird experts • Too late to implement plan (habitat trashed) • Lack of will (political) to implement such plans • Species conservation low priority for governments • Law enforcement very weak • Land-use changes (nesting/prey sites) • Different priority for different departments • Political instability • Actions/initiatives not sustained • Global warming 	<ul style="list-style-type: none"> • Government interest to do the job • Strong nature conservation • Huge publicity of the action plan • Increased attention for bird conservation on the national scale • Media • Create nationalism • Presence of funding NGOs like BirdLife International • NGOs, Governments private cooperation • Collaboration with the national institute for environment and conservation Nature • REJT and Vulture Study Group and other NGOs working with governments to implement plan • Capacity (Vulture Study Group, NGOs Government) • Strong legislation • Adoption of National Biodiversity action plan on the way • Presence of national and international legislation • Cultural significant • Species In habiting protected areas • A good proportion of the species is found in protected Areas /IBAs • Human population Density low of the area to implement the Action Plan • Inaccessibility for human to disturb the area to implement the action plan • Proliferation of informal conservation area • Smart action plan • Eco-tourism Bird - watching • AP acts as umbrella for many scavengers (to other bird) • Lever for Additional money • Inter - Government Co-operation

Table 8: On-going projects

Country	Region/ Province	Project title	Duration	Contact person	Activities
South Africa	Northern Cape	Kalahari Raptor Project	1991- on going	Abrie Maritz	Ringling, Monitoring, Awareness
	National	Vulture Study Group	1970s – on going	Kerri Wolter	Awareness, Sasolt Vulture, monitoring project
		Poison Working Group	Mid 90- on going	Gerhard Verdoorn	Awareness, poison post northern analysis
		Eskom- Endangered Wildlife Trust Strategic Partnership	1997 – on going	Chrisvan Rooyen	Power line mortality Mitigation, Awareness, Monitoring
		Reservoir Drowning Mitigation	Mid 90s – on going	Mark Anderson	Data collection, Awareness Mitigation
Swaziland	Lowveld	Raptor Nest monitoring	2000 - on going	Ara Monadjem	Monitoring, Research Awareness
Burundi	Bujumbura	SSG/CEG	One year	Ntahuga Laurent	Monitoring Wetland birds
Ethiopia	Oromiya	Bale Ecosystem project		Anteneh Shimeles	
	Oromiya	Borena Restricted Range Spp Project		Anteneh Shimeles	
	National	IBA project		Anteneh Shimeles	
	Oromiya & Amhara	EWCP		Stuart & Zelalem	
	Afar	Wild Ass Project		Fanuel & Lakew	
	Afar Oromiya & SNNP	Grevy's Zebra Project		Stuart & Aslistair	
Namibia	Namib Desert	Lappet faced Vulture Monitoring	1990- on going)	Peter Birdgeford	Ringling, breed success Vulture restaurant
	Water berg area (N. Central)	Cape Vulture introduction and satellite tracking & Community awareness	2000- on going	Maria Diekmann (REST)	Vulture monitoring community awareness, vulture restaurant, research, reintroduction
	Windhoek	Vulture Rehabilitation	1990- on going	LiZ Komen N.A.R.R.E.C/PWG	Rehabilitation injured/ poisoned vultures
	NW Namibia	Aerial survey of Cape and Egyptian Vulture Population	1998- on going	Rob Simmons	Analyse of Cape Egyptian & vultures population
Djibouti	East Africa	Water bird Count	1 year	Houssin A Rayaleh National Coordinator	Ministry of Environment & WPO
Egypt	N. Africa	Egyptian biodiversity Conservation Strategy		Natural Conservation Sector	
		BirdLife International for conservation of IBAs		Shrif Baha EL-Din	
		PA Management strategies and establishing new ones		NCS	
		Proposed Bird Migration Research centre (Ringling)		Wed Ibrahim	

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Annex 8: Press Release

Concrete Plan to Save the Lappet-faced Vulture From Extinction

With a world population that is not more than 8000 individuals, the Lappet-faced Vulture is one of Africa's species that are considered vulnerable to extinction. Although the species has a very widespread distribution covering more than 29 countries in Africa, population densities are low, across most of its range.

Under the auspices of the BirdLife Africa Species Working Group, a workshop of international experts was held at the Simen Hotel, Addis Ababa, Ethiopia from 16-20 June 2003. It was hosted by the Ethiopian Wildlife and Natural History Society, facilitated by Nature Uganda and BirdLife South Africa and co-funded by the Royal Society for the Protection of Birds and the UK Drawing Initiative. It is believed that the process of developing an International Action Plan for this majestic and beautiful bird would help to create a network of government institutions and NGOs for a successful implementation of its objectives.

The thirteen NGO and government participants in the Ethiopian workshop were drawn from BirdLife partners in South Africa, Namibia, Burundi, Egypt, Djibouti, Uganda and Ethiopia. The workshop identified appropriate projects in areas of policy and legislation, research and monitoring, and awareness raising.

In his opening speech, Dr. Girma Balcha, General Manager of the Institute of Biodiversity Conservation and Research emphasized the timeliness of the action planning workshop in the face of the growing species extinction crises in Africa and the world at large and stressed up on a wider consultation amongst stakeholders for a successful implementation of the plan.

Dr Robert Simmons, a prominent Ornithologist from Namibia, observed that since the Lappet-faced Vulture's distributional range encompasses huge areas in Africa, the implementation of this action plan complements conservation initiatives designed for other wildlife and their habitat. Dr Mark Anderson, who is one of South Africa's most prominent vulture specialists, in his turn pointed out that there is a huge gap of knowledge concerning the status of Africa's Vulture Species and indicated the implementation of this action plan would result in the compilation of ecological and other information that would be useful for the conservation of vultures in the continent.

The workshop concluded that with active support for the Species Action Plan from the governments and conservation bodies in countries where the bird occurs, there is hope for the continued survival of this magnificent King of the Skies of Africa.

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Annex 9: Daily Evaluation/ Moodometer

	☹	☺	☺
Day 1		●	●●●●●●●●
Day 2		●●●●●●	●●●●
Day 3			
Day 4		●●●	●●●●●●●●
Overall		●●●	●●●●●●●●