

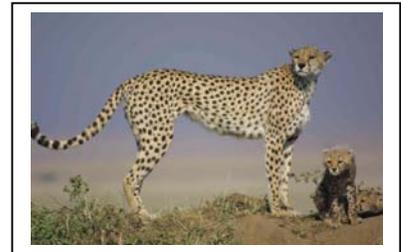
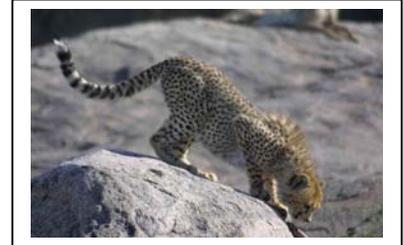
Bartels,P.; Bouwer,V.; Crosier,A.; Cilliers,D.; Durant,S.M.; Grisham,J.; Marker,L.; Wildt,D.E.; Friedmann,Y., editors. 2002. Global Cheetah Action Plan Review final workshop report. Global Cheetah Conservation Action Plan - Workshop held at Shumba Valley Lodge in South Africa from the 27th to the 30th of August 2001 Apple Valley, MN: IUCN / SSC Conservation Breeding Specialist Group; 78 p.

Keywords: review/report/cheetah/action plan/south africa/Africa/people/country/American cheetah/population/recommendation/project/status

Abstract: In July 2002, the Cheetah Action Plan Review workshop was again organised by CBSG South Africa to review the 2001 Action Plan and to formalise and further develop the Cheetah Interest Group. This workshop was attended by 46 people from 12 countries and sponsored by the North American Cheetah SSP and its member institutions. Six working groups convened over a three day period to discuss and review the Global Cheetah Action Plan. Five of these working groups dealt with the same issues covered in the 2001 workshop, and a new working group was convened to discuss the situation facing the Iranian and North African cheetah populations. Once again, the workshop format comprised a series of intensive working group sessions and open floor plenary session where all workshop participants could evaluate, debate and confer on the resolutions and recommendations put forward by the groups. Groups were tasked with updating the current situation, reviewing project status, updating the stakeholders needs, reevaluating available resources and potential obstacles and redesigning projects and actions where necessary.

GLOBAL CHEETAH ACTION PLAN REVIEW

REPORT from the WORKSHOP
Held in SOUTH AFRICA
JULY 2002



SPONSORED BY:

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IN COLLABORATION WITH:

The American Zoo and Aquarium Association's (AZA) Cheetah Species Survival Plan
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CONSERVATION BREEDING
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JULY 2002

EDITED BY:

Adrienne Crosier, David Wildt, Deon Cilliers, Jack Grisham, Laurie Marker, Leon Venter, Martin Mulama, Paul Bartels, Sarah Durant, Vanessa Bouwer and Yolán Friedmann.

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Bartels, P., Boucher, V., Crosier, A., Cilliers, D., Durant, S., Grisham, J., Marker, L., Mulama, M., Venter, L., Wildt, D., and Friedmann Y. (Eds) 2002. ***Global Cheetah Action Plan Review final workshop report***. Conservation Breeding Specialist Group SSC/IUCN.

Additional copies of this publication can be ordered from CBSG South Africa at ph./fax: + 27 (0) 11 701 3811 or e-mail: cbsgsa@wol.co.za, P.O. Box 731, Lanseria, 1748, South Africa, www.ewt.org.za/cbsg or through IUCN/SSC Conservation Breeding Specialist Group, 12101 Johnny Cake Ridge Road, Apple Valley, MN 55124 USA.

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July 2002

CBSG South Africa gratefully acknowledges the support of:

Vodacom
BP Southern Africa
Elizabeth Wakeman Henderson Charitable Trust
Davies Foundation
Diana Twining and the North American Cheetah SSP

Lomas Wildlife Trust
FROG Audiovisual and LG Electronics
Embassy of the United States
National Zoological Gardens of South Africa

GLOBAL CHEETAH ACTION PLAN REVIEW

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SECTION 1

EXECUTIVE SUMMARY, WORKING GROUP SOLUTIONS AND RECOMMENDATIONS

Executive Summary, Working Group Solutions and Recommendations

EXECUTIVE SUMMARY

In August 2001, the first workshop to draft an International Action Plan for cheetah was held in South Africa. Organised by the Conservation Breeding Specialist Group (CBSG), CBSG South Africa and the North American Cheetah Species Survival Plan (SSP), the workshop brought together 53 people from 11 countries who worked in six working groups that dealt with a wide variety of issues pertaining to conserving cheetah globally. Out of this workshop was borne the **Global Cheetah Action Plan** and an initiative to establish the **Cheetah Interest Group** – to serve the interests of its members by establishing a communication network, promoting cheetah conservation globally and supporting the development of partnerships and closer ties between the many role players in cheetah conservation worldwide.

In July 2002, the Cheetah Action Plan Review workshop was again organised by CBSG South Africa to review the 2001 Action Plan and to formalise and further develop the Cheetah Interest Group. This workshop was attended by 46 people from 12 countries and sponsored by the North American Cheetah SSP and its member institutions. Six working groups convened over a three day period to discuss and review the Global Cheetah Action Plan. Five of these working groups dealt with the same issues covered in the 2001 workshop, and a new working group was convened to discuss the situation facing the Iranian and North African cheetah populations. Once again, the workshop format comprised a series of intensive working group sessions and open floor plenary session where all workshop participants could evaluate, debate and confer on the resolutions and recommendations put forward by the groups. Groups were tasked with updating the current situation, reviewing project status, updating the stakeholders needs, reevaluating available resources and potential obstacles and redesigning projects and actions where necessary.

An overview of the six working groups and their conclusions is as follows:

1. CHEETAH HEALTH:

This group began by recognising that disease is a natural component of the ecology and is only rarely of concern in viable wild cheetah populations. However, there is an increasing number of anthropogenic factors, such as habitat alteration and human interventions, that may increase the risk of disease in wild populations. While it is assumed that these diseases do not affect wild populations, there is concern that they may arise in wild animals that are trapped, held in captive facilities and are translocated and may potentially transmit acquired infectious diseases through human actions. In dealing with the issues of diseases in cheetah, the group adopted the following as goals:

- Standardised protocols, datasheets and sample collection sheets for all people handling cheetah.
- Optimise sample storage and collection, with archival information from the Cheetah Biological Resource Banking (BRB) database made available to all.
- Samples submitted to reputable diagnostic laboratories for serology, infectious disease surveillance, genetic analysis, reproduction, etc.
- A retrospective survey to collate information from published sources regarding the health status of cheetah with availability of this information.
- An electronic platform for the exchange of current issues regarding health (diagnosis, epidemiology, aetiology, prevention and treatment).

- Conduct disease surveillance, whenever possible, in all range countries. Studies involving the collection of gastric biopsy samples in range countries should be continued to determine the health status of wild cheetah.
- Establish a database of normal reproductive traits of wild cheetah.
- Conduct a diet analysis, assessing the prey composition of wild cheetah diets.
- Conduct a comprehensive assessment of the management conditions of captive cheetah
- Develop a system of scoring stress.

In all cases, availability of the information to all parties was stressed.

2. CENSUSING CHEETAH:

The Census Working Group recognised the increasingly urgent need for good quantitative information on distribution and numbers of cheetah across Africa in order to identify and address threats to the long-term survival of cheetah and to test the effectiveness of conservation actions.

The census working group set as its overall objective the identification of key techniques that can be used to census cheetah across a variety of different habitats. The group made recommendations targeted at meeting this objective. As a priority, they stressed the urgent need for a workshop to bring together individuals responsible for cheetah censusing from as many cheetah range states as possible, together with experts in key census techniques. The aim of the workshop would be to compile a shortlist of key techniques for testing in the field. For each technique on the shortlist an appropriate methodology for the cheetah situation should also be devised. Techniques found to be effective after field testing will be used for censusing cheetah across as many countries and different habitats as possible. The group also noted the need to raise awareness of the need for information on cheetah numbers among the donor community. The action steps outlined by this working group serve to establish measures to obtain information on cheetah distribution and numbers across all areas potentially key for cheetahs in order to prioritise and assess conservation actions.

3. PROTECTION OF CHEETAH OUTSIDE PROTECTED AREAS:

Many cheetah in Africa live outside protected areas demarcated by national governments and are consequently, under threat from persecution by humans sharing the same areas with them. In addition, many human livelihood systems are affected by livestock losses to cheetah.

The participants of this working group felt that the first step in the process of resolving conflict is to identify and work with key people in each of the cheetah range states, to identify where conflict exists, why there is conflict and what possible solutions exist to resolve this conflict. A number of range states already have forums with representatives of all stakeholders involved with cheetah and these forums are working to provide solutions for their particular country. The participants felt that these existing forums should encourage and facilitate similar forums to be set up in other range states. They also believed that it was important to encourage regional co-operation among forums as cheetah populations exist across political boundaries.

It was accepted by the working group that not all land management practices are compatible with cheetah, and a need exists to move cheetah from areas where they are threatened to "safe" areas, such as private land where cheetah may be tolerated, protected areas or into captive populations. However, this must be carried out in a way that maximises the chances of survival of the species as a whole and along the lines of meta-population management. National, regional and international co-operation of all those involved is therefore encouraged.

If cheetah are to be effectively conserved, there is a need for coordination to prevent duplication and wastage of resources. It was acknowledged that there is a lack of understanding in many range states about cheetah biology, the role of cheetah and other predators in the ecosystem and the land management practices that favour co-existence. Co-operation among range state forums and organisations may assist in educating people living with cheetah and the possibility of expanding the area suitable for cheetah. Greater understanding of the factors affecting cheetah survival is necessary to assist in streamlining policies that affect cheetah, which are at present, often fragmented, inappropriate and un-enforced within and among range states.

To achieve these objectives it is imperative that the necessary resources, financial and logistical, be obtained.

4. LINKING *IN SITU* AND *EX SITU* CHEETAH CONSERVATION:

This working group was formed because there are advantages to linking field conservation activities to zoo management programmes, one of the most significant being formulating ways to channel funds into conservation activities. Zoos are being recognised as venues, for not only education, but for information dissemination and provoking interest and support of high priority field research. Thus, one of the highest priorities recognised by this working group was the need for connecting field researchers and zoo-based managers and researchers, which is one of the functions of the Global Cheetah Forum (GCF).

Since the inaugural meeting in 2001, GCF participants have: 1) produced a rough, first-cut database of cheetah related projects (*in situ* and *ex situ*); 2) assisted in fundraising through the North American Cheetah Species Survival Plan (SSP) for, amongst others, five *in situ* projects (Namibia, Zimbabwe, Kenya, South Africa); and 3) attempted to secure information from regional coordinators on the status of current *ex situ* populations.

This year, the Linkage Working Group reviewed the 2001 general recommendations and refined many objectives into more specific, action-based guidelines. During this workshop, working group members:

- Designed and developed an electronic database for recording and disseminating information via the website on extant cheetah related research projects.
- Identified the need and mechanism to convene a 'Global *Ex Situ* Managers Workshop' in 2003 for the purpose of promoting and then executing a reasonable cooperative breeding plan for cheetah maintained *ex situ*.
- Recognized the need and committed to a plan to work with the IUCN's Cat Specialist Group to identify field researchers/projects in Northern and Western Africa.

Individuals and timelines were assigned to each recommendation.

5. EDUCATION AND COMMUNICATION:

This working group grappled with issues that inhibit communication and the development of effective education programmes relating to the cheetah. These issues include the lack of resources in Africa, the lack of co-operation among stakeholders, defects in educational systems, inappropriate political appointments, the diversity of cultures and the limited opportunities for involvement in fauna and flora for most of Africa's peoples. This group determined that there was one core issue which, if addressed, would lead to progress on matters pertaining to education and communication.

It was acknowledged that the initiatives begun by this group had been very successful and that the initial lack of cooperation among stakeholders had been replaced by a willingness to cooperate, and that the issue now was the implementation of a strategy and the expansion of the network. A fear was expressed that as this took place pilot projects would be neglected.

A practical starting point was therefore stated as the need to identify individuals who are able to initiate a visioning process/workshop/programme in countries where cheetah occur. These individuals will include a facilitator, skills/resource personnel and the anchor organisation(s). The anchor organisation is to indicate the correct target audience(s), for example school-based educators, urban or rural farmers, tourism bodies etc. It was agreed that as a start De Wildt would initiate a visioning workshop and involve representatives from Botswana and Zimbabwe.

On the issue of communication, this group recommended that an internal communication structure be developed and central to this was the development of a dynamic website. The goals of the Global Cheetah Forum include this, and many of the goals of this working group will be fulfilled through this forum.

6. CRITICAL CHEETAH POPULATIONS:

There is very limited information on cheetah in most of the North and West Africa range countries. This information continues to identify that these populations are critically endangered and a conservation priority. Additionally, there is a lot of illegal trade out of these countries with cheetah, which are confiscated in the UAE. This group therefore focussed mainly on actions which will result in improving knowledge and information available on the cheetah populations, trends, threats and requirements in North Africa.

The group recommended that the Cat Specialist Group (CSG) chairs meet with the WWF International representative to find out more about their future plans in the area to avoid duplication. They were also requested to meet with the team from the Museum of Natural History of Paris to coordinate research efforts and provide advice as to how to best survey the areas they are visiting for cheetah.

Much time was spent planning the Inception Mission which is part of the UNDP/ GEF Conservation of the Asiatic Cheetah Project (CACP). The Cheetah Conservation Fund (CCF) and DoE will manage and carry out a multi-disciplined Inception Mission to achieve the overall goals of the project. CCF will work in a collaborative fashion with Wildlife Conservation Society (WCS), which is providing two activities to support the CACP, in order to have a well-coordinated approach to the project. The Inception Mission will assemble and coordinate a multi-disciplinary team of national and international technical specialists relevant to the issue of cheetah conservation in Islamic Republic of Iran. This team will utilise cheetah distribution information generated by the Rapid Biological Survey to locate initial study and action sites along with historic information relevant to cheetah survival in Iran. At these sites the team will use its expertise to undertake a detailed analysis of local habitat and socio-economic and cultural investigations related to the cheetah.

To a degree, the Inception Mission will study the situation and role of relevant stakeholders at the sites and within the governmental and non-governmental structures of I.R. Iran. After the Inception Mission, these stakeholders will be assisted to organise a system of collaborative management for the conservation and rehabilitation of the cheetah, its habitat and associated species. In addition to stakeholders, the Inception Mission will assist in identifying and preparing like-minded partners for long-term engagement in the aims of the project.

Goals of the National Inception Workshop include bringing together all partners including government bodies, NGOs, local and international community groups and experts to:

1. Identify root causes for each of the key areas
2. Discuss solutions
3. Develop action steps to solve the problems – ie. short, medium and long term, and
4. Identify collaborations between government departments, the local communities and the international community.

GROUP PRIORITISATION OF RECOMMENDATIONS:

Each working group fine-tuned a list of their top four or five solutions (chosen by paired ranking of their group's combined solutions list) to a plenary session where these were combined into a list of 25 solutions for the whole group. Each person then pair-ranked this list of twenty-five solutions to arrive at their own prioritised list of solutions for effective conservation of cheetah globally. The combined results yield a list of priority solutions and recommendations upon which the whole group had agreed and contributed towards.

The top five solutions from this group list were, in order of priority:

1. Improve the information available to educate people living with cheetah about the basic ecology of cheetah, its importance as a species in the ecosystem, livestock management, game management, the value of conservancies and identification of predators responsible for killing a stock animal (livestock or game).
2. Pass on education material to the people actively living with cheetah. This will require individuals involved in nature conservation (extension workers, agricultural people, biology students, farmers / farmers wives, sociologists and community based NGOs) to be made aware of the issues and shown how to explain them to people living on the land.
3. Identifying key representatives of stakeholders in the range states from which sub-regional and regional cheetah forums can be developed to address and resolve the issues of conflict within and among countries and work towards resolving conflict. These forums will be used to identify key people within those countries to act as spokespersons and role models.
4. More research to better understand the role of cheetah in ecosystems outside of protected areas.
5. Convene a workshop to identify census techniques for assessing and monitoring cheetah distribution and density across range states.

THE GLOBAL CHEETAH FORUM:

Additional open floor and working group sessions were convened to further develop the Cheetah Interest Group (CIG) which was given the new name of the **Global Cheetah Forum (GCF)**. The group developed the goals and objectives of the GCF, discussing its mission and electing a secretariat and a steering committee. The steering committee comprises 13 members from seven countries. CBSG South Africa will serve the role of secretariat of the GCF.

GLOBAL CHEETAH ACTION PLAN REVIEW

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SECTION 2

INTRODUCTION AND OVERVIEW

BACKGROUND AND OVERVIEW:

The cheetah (*Acinonyx jubatus*) is listed as Vulnerable on the IUCN Global Red List (Hilton-Taylor, 2000) and is an Appendix I species in the Convention on International Trade in Endangered Species (CITES 2002). Built for speed, the cheetah can reach speeds of almost 100 kilometres per hour and is the fastest land animal. Male cheetah can break the solitary pattern followed by female cheetah, and form close bonds in coalitions of between two and four members (Caro, 1994). These coalitions are usually, but not always made up of brothers (Caro 1994). Between one and seven cubs may be born after a gestation period of 90 – 95 days. Prey species include mainly small antelope species and hares but groups of males may collaboratively bring down larger prey such as wildebeest, waterbuck and kudu (Caro, 1994; Marker-Kraus et al. 1996). Cheetah are found in a wide variety of habitats ranging from open plains and savannah to arid or semi desert regions (Mills & Hess, 1997) and thick bush. Historically, cheetah ranged widely throughout Africa and southwest Asia, today however, free-ranging cheetah inhabit areas of North Africa, the Sahel, eastern and southern Africa only. The largest populations are to be found in Namibia, Kenya and Botswana ((Marker-Kraus et al. 1996; Mills & Hess, 1997) Over the past 50 years, cheetah have become extinct in at least 13 countries (Marker, 1998) and it is believed that 12 – 15 000 cheetah remain in the wild.

Although the species faces different problems in different parts of its range, the main causes of decline are human-cheetah conflict and a vast reduction in suitable, secure habitat. As humans use more and more land for livestock production, the cheetah's habitat has become fragmented, and cheetah are indiscriminately killed in many countries as possible livestock predators. It has been argued that low genetic diversity may make cheetah more susceptible to ecological and environmental changes, as well as more vulnerable to disease.

GLOBAL CHEETAH ACTION PLAN WORKSHOP: 2001

In August 2001, the first workshop to draft an International Action Plan for cheetah was held in South Africa. Organised by the Conservation Breeding Specialist Group (CBSG, SSC/IUCN), CBSG South Africa and the North American Cheetah Species Survival Plan (SSP), the workshop brought together 53 people from 11 countries who worked in six working groups to deal with issues pertaining to education and awareness, cheetah health, *in situ* and *ex situ* population management, the protection of cheetah outside protected areas, the cheetah studbook and cheetah censusing techniques. Out of this workshop was borne the **Global Cheetah Action Plan**, and an initiative to establish the **Cheetah Interest Group**. This group was intended to serve the interests of its members by establishing a communication network, promoting cheetah conservation globally and supporting the development of partnerships and closer ties among the many role players in cheetah conservation worldwide.

CHEETAH ACTION PLAN REVIEW WORKSHOP: 2002

Almost one year later, in July 2002, a follow-up workshop was organised by CBSG South Africa and the North American Cheetah SSP to review the 2001 Action Plan and to formalise and further develop the Cheetah Interest Group.

The 2002 **Cheetah Action Plan Review Workshop** was attended by 46 people from 12 countries (Kenya, South Africa, Zimbabwe, Botswana, United States of America, United Arab Emirates, Iran, Botswana, Namibia, Tanzania, Switzerland and the United Kingdom) and was sponsored by the

North American Cheetah Species Survival Plan (SSP) and its member institutions. Six working groups convened over a three day period to discuss and review the Global Cheetah Action Plan. Five of these working groups dealt with the same issues covered in the 2001 workshop (education and awareness, cheetah health, *in situ* and *ex situ* population management, the protection of cheetah outside protected areas and cheetah censusing techniques) and a new working group was convened to discuss the situation facing Asiatic cheetah populations in Iran.

Once again, the workshop format comprised a series of intensive working group sessions and open floor discussions where all workshop participants could evaluate, debate and confer on the resolutions and recommendations put forward by the groups. The groups' tasks, spread over three days, included updating the current situation, reviewing project status, updating the requirements and needs of the stakeholders, re-assessing the previously drafted solutions and goals of each working group, re-evaluating the resources, collaborators and obstacles and redrafting projects and actions where necessary. Projects which had been completed were evaluated for success or failure and new projects were drafted to address those that had failed.

Additional open floor and working group sessions were also convened to further develop the **Cheetah Interest Group (CIG)**. The first change made was the renaming of the group to The **Global Cheetah Forum (GCF)**. The group developed goals and objectives for the GCF, through whole group brainstorming sessions and further breakaway working group refinement. The GCF mission was also determined and a secretariat and steering committee were elected. The steering committee comprises 13 members from seven countries. CBSG South Africa was elected to continue serving as secretariat of the GCF. A set of objectives and goals for the GCF were drafted and discussions pertaining to future workshops and meetings were also held.

Results of this review workshop indicate that progress has been made in every working group. However, certain projects required refining and re-evaluation in accordance with the progress made or obstacles encountered.

Grateful thanks to the following sponsors of this workshop:

AZA Cheetah SSP, Birmingham Zoo, Cincinnati Zoo, Columbus Zoo, Endangered Wildlife Trust, Fossil Rim Wildlife Centre, International Society for Endangered Cats (ISEC), Kirkpatrick Foundation / Oklahoma City, Oklahoma City Zoo, San Diego Zoo, St. Louis Zoo and the Conservation Breeding Specialist Group / CBSG South Africa.

THE CBSG ACTION PLANNING PROCESS :

CBSG Action Planning Workshops are designed to bring together biologists, wildlife managers, taxonomists and other stakeholders with relevant expertise and a vested interest in a collaborative effort to 1) assess the risks associated with species survival and conservation programmes, 2) formulate tactics for effectively conserving threatened species and 3) develop better management strategies for conservation programmes and conservation challenges. These workshops are held in the range countries and the process allows for a systematic all-inclusive development of practical resolutions and recommendations with decisions made by the region's conservation personnel. This allows for practical and expedient implementation of the resulting management plan.

Integration of Science, Management, and Stakeholders

The CBSG Action Planning Workshop process is based upon biological and sociological science. Effective conservation action is best built upon a synthesis of available biological information, but is dependent on actions of humans living within the range of threatened species as well as established national and international interests. There are characteristic patterns of human behaviour that are cross-disciplinary and cross-cultural which affect the processes of communication, problem-solving and collaboration: 1) in the acquisition, sharing, and analysis of information; 2) in the perception and characterisation of risk; 3) in the development of trust among individuals; and 4) in 'territoriality' (personal, institutional, local, national). Each of these has strong emotional components that shape our interactions. Recognition of these patterns has been essential in the development of processes to assist people in working groups to reach agreement on needed conservation actions, collaboration needed and to establish new working relationships.

Frequently, local management agencies, external consultants and local experts have developed management plans. However, an isolated narrow professional approach focusing primarily on the perceived biological problems has little effect on the political and social changes necessary for collaboration, effective management and conservation of habitat fragments or protected areas and their species components. CBSG workshops are organised to bring together the full range of groups with a strong interest in conserving and managing the species in its habitat or the components and or consequences of such management. One goal in all workshops is to reach a common understanding of the state of scientific knowledge available and its possible application to the decision-making process and to needed management actions. The decision-making driven workshop process with intensive deliberation among stakeholders is a powerful tool for extracting, assembling and exploring information. This process encourages developing a shared understanding across wide boundaries of training and expertise. These tools also support building working agreements and instil local ownership of the problems, the decisions and their management during the workshop process. As participants appreciate the complexity of the problems as a group, they take greater ownership of the process as well as the ultimate recommendations made to achieve workable solutions. This is essential if the management recommendations generated by the workshops are to succeed.

Workshop Processes and Multiple Stakeholders

CBSG Workshop processes provide an objective environment, expert knowledge, and a neutral facilitation process that supports sharing of available information across institutions and stakeholder groups. Agreements are reached on the issues, information is made available and useful and practical management recommendations are made for the taxon and habitat system under consideration. The process has been remarkably successful in unearthing and integrating previously unpublished information for the decision making process. Their proven heuristic value and constant refinement and expansion have made the CBSG CAMP, PHVA and Action Planning

processes some of the most imaginative and productive organising forces for species conservation today (Conway, 1995).

CBSG participants have learned a host of lessons in more than 120 workshop experiences in more than 40 countries (2002). Traditional approaches to threatened species problems have tended to emphasise our lack of information and the need for additional research. This has been coupled with a hesitancy to make explicit risk assessments of species status and a reluctance to make immediate or non-traditional management recommendations. The result has been long delays in preparing action plans, loss of momentum, dependency on crisis-driven actions or broad recommendations that do not provide useful guidance to the managers.

CBSG's interactive and participatory workshop approach produces positive effects on management decision-making and in generating political and social support for conservation actions by local people. CBSG participants recognise that the present science is imperfect and that management policies and actions need to be designed as part of a biological and social learning process. The workshop process essentially provides a means for designing management decisions and programs on the basis of sound science while allowing new information and unexpected events to be used for learning and to adjust management practices.

GLOBAL CHEETAH ACTION PLAN REVIEW

REPORT from the WORKSHOP
Held in SOUTH AFRICA
JULY 2002



SECTION 3

ABSTRACTS OF PRESENTATIONS

Activities of the North American Cheetah SSP in the Past Year

Jack Grisham: Cheetah Species Survival Plan (SSP), USA

The North American Cheetah Species Survival Plan (SSP) was formed in 1984 to provide genetic and demographic management of the cheetah. In 1988, cheetah in the SSP were declared a research population to develop a better understanding of the baseline biology of the species. Specific research protocols were developed for: behaviour, nutrition, infectious disease, pathology, reproductive biology and genetics. Over the next three years more than 120 animals were evaluated. The results of this research was published in a special edition of Zoo Biology (Wiley-Liss, USA). Additionally an Education component was developed by the SSP to raise public awareness of cheetah and their conservation needs in North America. The SSP is currently networking with other regional *ex situ* programmes for global management of the captive population.

At the 2001 Global Cheetah Conservation Action Plan Workshop, a number of *in situ* conservation projects were identified. Dusty Lombardi of the Columbus Zoo, contacted all the researchers who had submitted research proposals and asked for a more formalised research proposal that could be evaluated and possibly supported by the North American SSP. A total of twelve proposals were received and reviewed by the SSP Management Group. Five proposals were either completely or partially funded to date (July 2002) by the SSP or individual zoos. Listed below are some of these projects supported by zoos in North America.

GLOBAL

Support Global Cheetah Conservation Action Plan Workshop	2001
Support Cheetah Interest Group Workshop	2002
Development of CIG Website	2001
Support of CIG Website	2002
Support of CBSG South Africa	2002

NAMIBIA

General Operating Support for the Cheetah Conservation Fund (Cincinnati Zoo, Oklahoma City Zoo, White Oak Conservation Centre, Columbus Zoo)	2001 & 2002
Teachers Workshop (Cincinnati Zoo)	2002
Reproductive Physiologist at the CCF (Namibia) (Smithsonian National Zoological Park, White Oak Conservation Centre and Ned and Diana Twining)	2002
Veterinary Technician at the CCF (Namibia) (White Oak Conservation Centre)	2002
Endocrine Lab (Cincinnati Zoo)	2002
Education and Keeper Loan Programme (Cincinnati Zoo)	2002

ZIMBABWE

Support Cheetah Leopard Translocation Project 2002
(Columbus Zoo, Oklahoma City Zoo, Oregon Zoo)

Cheetah Survey by the Marwell Trust 2002
(Columbus Zoo)

SOUTH AFRICA

Teachers Capacity Building Workshop 2001
(Smithsonian National Zoological Park, Rotary
International and British Airways)

Teachers Capacity Building Workshop – Animal Awareness & Appreciation 2002
(Smithsonian National Zoological Park, Fossil Rim
Wildlife Centre, International Society for Endangered Cats)

KENYA

Status of the cheetah in Masaai Mara 2002
(Columbus Zoo)

National Cheetah Management Programme – South Africa

Deon Cilliers, NCMP and De Wildt Cheetah Centre, South Africa

Introduction:

As chairman of the National Cheetah Management Programme – South Africa (SA), I would like to update you on the actions and projects of this umbrella forum for cheetah related issues in South Africa. The NCMP was brought into life during late 1999 by Ann van Dyk of the De Wildt Cheetah and Wildlife Centre in response to a request from the farming community in the Thabazimbi Magisterial District of the Limpopo Province, South Africa. The farming communities in these areas were suffering losses due to cheetah predation and were seeking a solution to this. Ann van Dyk took the initiative and invited all role-players in cheetah related issues to a meeting at the De Wildt Cheetah and Wildlife Centre. The “cheetah issue” was discussed in detail and it was realised that this issue was more complicated than originally anticipated. It was decided that a forum should be created, where cheetah related issues could be discussed and possible solutions sought. The NCMP is a group of role-players, seeking long-term solutions for the conservation of cheetah in South Africa. The mission of the NCMP is: *“to ensure the long term survival of the wild cheetah and its ecosystems through the implementation of a national management plan by means of integrated conservation, research and education programmes”*.

Strategies:

The role-players in the NCMP agreed that there are no quick solutions to the perceived cheetah problem on farmlands and that thorough research should be undertaken to implement sound conservation plans to ensure the survival of the cheetah, while taking the landowners and farmers into consideration.

The following short-term strategies were identified:

- **The NCMP should support cost-free conflict resolution workshops in the farming communities:** These workshops should inform landowners about alternative predator control methods that should be used to control and prevent predator losses.
- **Assistance to farmers who suffer losses due to predation by cheetah:** Field officers employed by government agencies as well as NGO's such as De Wildt and Hoedspruit Cheetah Breeding Centres should assist land users in capturing and removing cheetah that cause financial losses due to ongoing predation. These field officers should also educate landowners about the role of predators in the ecosystem and about preventative measures that could be taken to prevent losses from predation.
- **Compensation scheme for live caught cheetah:** Landowners requested some direct financial benefit from live cheetah that were removed as problem animals. Due to the unknown status of cheetah in SA, a free market system could not be supported by the NCMP. It was decided that a Compensation Scheme should be developed to compensate farmers with a fixed amount for live cheetah. These cheetah will then be relocated to approved conservation areas.
- **Relocation of problem cheetah:** The NCMP should identify suitable areas for the relocation of captured cheetah in SA. All cheetah received through the Compensation Scheme should be relocated by the NCMP to these approved conservation areas. A database should be kept of suitable areas as well as of cheetah that are relocated.
- **Farm management practices:** It has been proven by similar programmes in neighbouring countries that cheetah predation can be minimized by adapting certain farm management practices. These adaptations should be investigated by the NCMP and adapted accordingly to suit South African situations.

The following long-term strategies were identified:

- Cheetah population census and monitoring programme.
- Development of predator friendly farm management practices / plans.
- Ongoing workshops with farming communities.
- Development of a meta-population management plan.
- Establishment of conservancies in the cheetah range.
- Cooperation with neighbouring countries.
- Cooperation with Cheetah Interest Group (now the Global Cheetah Forum).

Who are the official supporters of the NCMP?

The NCMP is an umbrella liaison forum for cheetah related issues in South Africa. This means that anybody interested in cheetah related issues is welcome to be part of the NCMP.

The main role-players in the NCMP include the following:

- De Wildt Cheetah and Wildlife Trust
- Hoedspruit Centre for Endangered Species
- Cango Wildlife Ranch
- Endangered Wildlife Trust (Poison Working Group, Carnivore Conservation Group)
- Organized agriculture
- Hunting organizations (PHASA, CHASA)
- Provincial and national conservation authorities (advisory capacity)
- Interested individual landowners
- Academic institutions (wildlife and veterinary)
- Mazda Wildlife Fund
- International Cheetah Conservation Foundation.

General status of cheetah in South Africa:

Little information is known about the current wild cheetah population on farmlands in South Africa. There is a perception that the wild cheetah population in South Africa is increasing on farmlands, due to increased habitat and prey species (game ranching areas). It seems as if cheetah occur widely spread throughout the Limpopo Province and along the Botswana border of the North West and Northern Cape Provinces.

It is a fact that cheetah are persecuted by landowners and farmers in the above-mentioned provinces, mainly because cheetah prey on game populations that were introduced by farmers to game ranches. Wild cheetah in South Africa may not be utilised by landowners and are thus seen as worthless animals.

It is estimated that 340 cheetah occur in South African protected areas (state and private) and that the majority of cheetah (estimated population of 600) occur on farmlands as free roaming animals. It is thus of great importance to focus on the free-roaming cheetah as this represents the majority of the cheetah population in SA. Cheetah populations in protected areas are small and in most cases not viable. The NCMP aims to launch various conservation projects with the assistance of the main role-players to ensure the survival of cheetah on farmlands in South Africa.

Relocations to date:

The NCMP has relocated 41 cheetah to date in South Africa to 11 protected areas. Cheetah are relocated to these areas to create viable founder populations.

CCF Updates on Cheetah in Namibia and Beyond

Laurie Marker, Executive Director, Cheetah Conservation Fund, Namibia

Since the Global Cheetah Conservation Plan meeting in South Africa in August 2001, the Cheetah Conservation Fund has continued its activities in cheetah research and conservation education outreach activities in collaboration with various individuals, organisations and governments internationally. During the past year, CCF has assisted cheetah programmes in Iran, Kenya, Botswana, Zimbabwe, South Africa, and the United States.

In November 2002, Cynthia Olson, one of CCF's scientific advisors, and I spent a week in Iran meeting with members of the Department of the Environment (DOE) and the United Nations Development Programme (UNDP) to learn about their efforts in cheetah conservation. In addition, we were taken to one of the reserves where cheetah are still found. As a result of this trip to Iran, in January 2002, three members of DOE spent a week at CCF's Research and Education Centre in Namibia. During this week, the team, learned the basics of capture, handling, bio-medical sample collection of wild cheetah, husbandry and care of captive cheetah, basics of radio-tracking along with learning about CCF's education and community development programmes. Similar training was given to the Marwell Trust's Zimbabwe Cheetah Programme staff in August 2001, and the staff from the Botswana based Mokolodi Cheetah Project in July 2002. Training efforts stressed the use of standardised protocols, datasheets and sample collection

In December 2001, CCF's Kenya project began, and Mary Wykstra moved to the Nakuru Conservation Forum. During 2002, CCF worked actively with the Kenya Wildlife Service to develop posters, which have been placed in tourist facilities in the Masai Mara to inform tourists to not surround cheetah with their vehicles, as well as asking for ID photos of cheetah. Mary along with her Kenyan field assistant, Cosmos, began an in-depth questionnaire survey in the Nakuru Conservation Forum looking into the reasons for decline of cheetah in this region of the country. In addition, education outreach programmes about cheetah began and CCF is collaborating with multiple other organisations to promote cheetah conservation in Kenya.

In January 2002, CCF hosted Drs. Linda Munson and Scott Citino who conducted a training course to six Namibian veterinarians in gastric biopsy collection. Through the support of the White Oak Conservation Centre and the Smithsonian Institution, a full time veterinary technician and a reproductive physiology post doc joined CCF's clinical team, who are tasked with genome resource banking of sperm from wild male cheetah, along with freeze thaw experiments of sperm, and collecting gastric biopsies on all wild cheetah coming into CCF's Research Centre.

In April 2002, the Namibia Ambassador and myself were hosted by the Cincinnati Zoo to see the Namibia cheetah donated to the US by Namibia in 2001. The Ambassador was given a key to the city and met with the city's business leaders. Through the support of the Cincinnati Zoo, CCF hosted a Namibian Teachers Workshop, which was facilitated by team members of the Smithsonian's National Zoo in collaboration with Cheetah OutReach from South Africa, and Fossil Rim Wildlife Centre in Texas. Over 25 educators from 4 countries worked together on ways to integrate predators into the Namibian curriculum and lifestyles.

In the 2000 and 2001 International Cheetah Studbook was completed and has subsequently been distributed to all facilities housing cheetah. The global cheetah population as of December 2001 was 1 366 (704.662) cheetah in 264 facilities in 52 countries, of which 70% (n=958) were captive-born. During 2001, there were 41 litters of cubs born totalling 128 (65.58.5) in 19 facilities.

In July 2002, CCF presented the 2nd Annual Cheetah Conservationist of the Year Award to the Ralf Ritter family, for their on-going willingness to promote non-lethal predator control and thus farm successfully with cheetah on their land. During the past year, Namibian farmers allowed CCF to tag and release over 50 cheetah which shows continued support for CCF's work.

Cheetah Defrag? Consolidation of Suitable Cheetah Habitat, in an Increasingly Fragmented Landscape – Zimbabwe

G.K (Nettie) Purchase, Carnivore Project Co-ordinator, Marwell Zimbabwe Trust, Zimbabwe

This project is currently sponsored by Marwell Zimbabwe Trust, Marwell Preservation Trust, Columbus Zoo, Colchester Zoo, Tulsa Zoo and San Antonio Zoo, and it being done on behalf of the Parks and Wildlife Management Authority, Zimbabwe.

The cheetah in Zimbabwe is both a specially protected species by law and a major problem animal on cattle and game farms throughout the west and south-eastern parts of the country. However, the exact status and distribution of cheetah in Zimbabwe is not known and, therefore, it is difficult to assess the threats to the population and the most suitable way to manage the population. The Marwell Zimbabwe Trust (MZT) Cheetah Project has begun to determine the distribution of cheetah outside of the National Parks estate in relation to land use and where they are considered to be problem animals. Attitudes of land owners are being assessed so that a suitable management strategy can be drawn up that reduces the conflict between the land user and cheetah. Until it is clear how many cheetah are present on private land, the relationship between this population and that which occurs in protected areas, and what the threats to the cheetah population as a whole are, it is difficult to effectively manage the species.

The MZT cheetah project is determining the distribution of cheetah and attitudes of land users through the use of questionnaires, face-to-face interviews, phone interviews and evaluation of problem animal reports. At the same time, the attitudes of the land users in relation to their livelihood system are being assessed and methods of livestock management that reduce cheetah predation evaluated. The project also provides educational material to land users about the importance of predators in the ecosystem and how their land is necessary to sustain a viable population of cheetah. They are also provided with information about livestock management techniques that have been shown to reduce cheetah predation.

The data that have been collected to date show that the majority of cheetah appear to be present on commercial cattle and game farms. Communally owned land and old small scale farming areas have not reported many cheetah on their properties. The Government of Zimbabwe is currently implementing a fast track land re-settlement programme, which is resulting in rapid changes from large scale commercial farming to small scale commercial and/or subsistence farming in many parts of the country. A number of these new small scale farms have reported having cheetah but the tolerance of the new users appears very low, although this seems to be a result of lack of understanding of the behaviour of the cheetah and confusion between cheetah and leopards.

In commercial farming areas, owners range from being extremely tolerant of cheetah to bitterly against having any animals on their properties. The distribution of owners in relation to their attitude is disjointed with cheetah friendly farmers neighbouring farmers who are intolerant and destroy cheetah. The little data recorded so far suggest that cheetah use more than one property and this disjointed landscape increasing their vulnerability. With the addition of the rapid changes in land use, it is not clear whether enough consolidated "cheetah habitat" will remain in Zimbabwe.

However, the data available at present is limited and there is a suggestion that with increased understanding of the cheetah's behaviour, land users can become more tolerant of cheetah. Without a good understanding of the movement behaviour of cheetah in Zimbabwe it is not clear how much suitable habitat we have to maintain to ensure a viable population, it may be that the remaining commercial farming areas are sufficient. All these questions and others are being addressed by the MZT Cheetah Project and the Chipangali Wildlife Research Unit in an effort to provide meaningful data to the Parks and Wildlife Management Authority (PWMA).

Experiences in Teacher Education Using Cheetah and Other Wildlife as Educational Tools in the Western Cape

Annie Beckhelling, Cheetah Outreach, Cape Town, South Africa

Sponsors:

AZA Cheetah SPP
Columbus Zoo
St Louis Zoo

Oklahoma City Zoo
Cincinnati Zoo
Kirkpatrick Foundation

Birmingham Zoo
San Diego Zoo
Oklahoma City

The Cheetah as a Learning Tool: Some of the ways in which the cheetah can be used to teach a variety of subjects

- **Diminishing Range**
 - Geography
 - Social Studies
- **Population Loss**
 - Technology
 - Mathematics
- **Speed**
 - Natural Science
 - Mathematics
- **Natural Beauty and Association with Man**
 - History
 - Art
 - Natural Sciences
- **Genetics**
 - Natural Science
- **Conservation**
 - Technology
 - Language Arts
 - An African Animal - Embodying African Pride

Phrases Which Resonated with the Target Audience

- “Embodying extraordinary grace, strength, resilience and beauty, the epitome of Africa.”
- “As we struggle for an African renaissance, this exceptional species is used to highlight the wealth inherent in our continent’s wildlife.”
- “The cheetah, which once ranged four continents, is now essentially an African species and its most endangered great cat. Facing possible extinction, Africa is its last hope.”
- “This dramatic decreased in range can be used to emphasise our continent’s role in world conservation.”
- “Terms such as biodiversity, food chains, reproduction are already being taught in our classes, applying these to the cheetah just makes these lessons more African, personal and interesting.”
- “The cheetah is the obvious choice for this prominent role in EE in the only continent that can afford this species a future - AFRICA.”

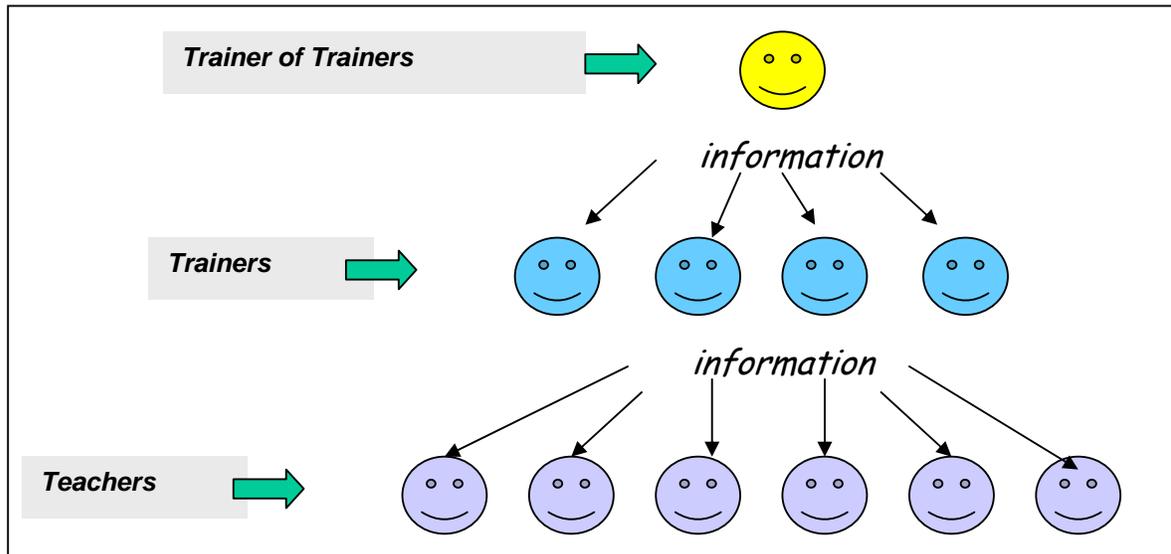
Policy Statements

- In 1994 the RDP Document stated, “There is a need to develop programmes to rekindle our people’s love of the land and to increase environmental education policy at all levels and to empower communities to act on environmental issues and to promote an environmental ethic.” (DEA&T, 2001)
- The White Paper on Education and Training published in 1995 projected that Environmental Education “must be a vital role of all levels and programmes of the education and training systems.” (DEA&T, 2001)

Some Common Principles Underpinning the Development of Constantly Used Resources in Schools in the Western Cape

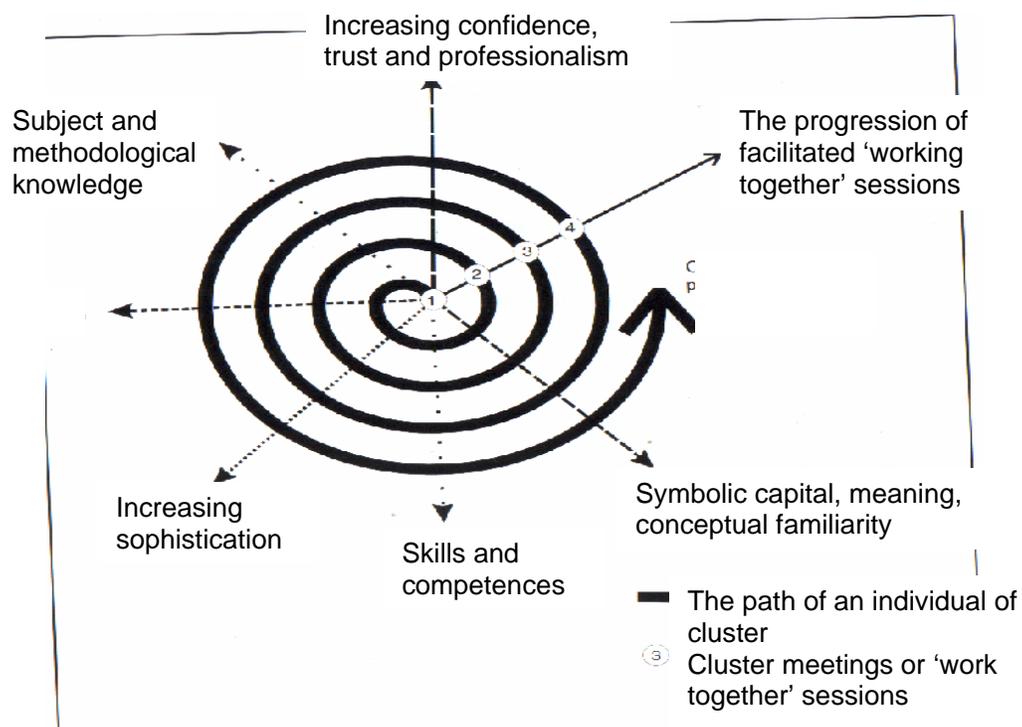
- Canvass the target market (learners) to assess needs.
- Build a writing team including all ethnic groups who will deliver to your target market (educators).
- Keep it **simple** and the method of presentation relevant (paper resource and posters - not electronic media).
- Pilot extensively - adapt for needs of deliverers to produce a user-friendly pack.
- Present lessons in relevant format (active learning module in RSA).
- Correlate to the curriculum and highlight links in each lessons (which outcome is being addressed) to motivate teachers to use resource.
- Plagiarise - shamelessly steal, borrow, beg and adapt existing resource materials.
- Respect the power of partnerships to build and supplement skills.
- Deliver through an influential partner.
- Support your resource using the **spiral**, not cascade, module - builds skills in teachers and reinforces message.
- Build from the bottom up. Deliver from the top down.
- Own your own programme.

The Cascade Model and its Shortcomings



- Externally designed with little regard for contextual realities.
- Makes no allowances for feedback.
- Focuses on the transmission of information, rather than the building of skills and competences.
- Has a tendency to multiply or retain errors that are passed 'down the chain'.
- Allows no time for reflection.
- Does not provide opportunities to clarify, reflect or practise in the field.
- Usually based on (often theoretical) sets of lectures.
- Provides no assistance in the field.

The Spiral Model and its Benefits



- Guided by policy.
- Responsive to needs of participants and context.
- Open-ended and long term approach to professional support.
- Focused on building skills, competences and attitudes.
- Circular nature means that it is recursive - it returns to the same point on its radius again and again.
- Competence based.
- Accommodating of democratic principles and negotiation

Background on the Status of Asiatic Cheetah in Iran

**Laurie Marker, Director Cheetah Conservation Fund, Namibia
Information from Marker 1998, and Marker 1997**

Population:

Current estimates are that there are less than 50 animals (DoE 2002). Historic estimates are between 100 and 200 cheetah (Karami 1989, Nowel and Jackson 1996) and believed to be less than 200 animals (Nowel and Jackson 1996, Asadi 1998) in 1998. Historic Information: In the 1970's the population was estimated at 400-450 (Joslin 1989, Asadi, 1998). As of 1998 cheetah were still to be found in very small groups in a variety of areas of this large country. Hormoz Asadi showing six areas in the country where cheetah still exists conducted a survey in 1998.

1. Evidence indicates definite dispersal of cheetah from the Koshe-Yeilagh and Miandasht protected areas towards the southern Khorasan. The survey indicates that there are at least 15 to 20 cheetah in southern Khorasan, and groups of 5-8 cheetah have been reported to be hunting wild sheep.
2. Cheetah are surviving in the unprotected areas in Bafgh region of Yazd province. Much of this region consists of arid mountains, and population estimates are still 10 to 15 animals including the Kalmand protected area.
3. A population is in the unprotected area of eastern Isfahan where the terrain consists of vast expanses of desert, unpopulated except for herdsman grazing goats and camels. Here livestock numbers have increased and the past gazelle population has decreased, but this region may still support 5-10 cheetah that are widely scattered.
4. A population is found in Kavir National Park and reports are frequent in this vast desert with arid mountains. The population corresponds with a gazelle population and there may still be 10 to 15 cheetah living here.
5. A population exists in the Garmsar, Damghan and Semnan unprotected areas in the northern part of the plateau. Here, 5 to 10 cheetah are in conflict with growing agriculture and human populations.
6. A population is found in the Khar Touran National Park and protected area, which may possess the highest cheetah density in Iran. Cheetah reports are frequent in this vast expanse of desert where there may be 15 to 20 cheetah living⁷.

Principal Threats:

Loss of habitat, poaching, limited numbers of prey species. Direct persecution by humans, either shepherds or local hunters. They are easy targets for people in four-wheel drive vehicles and motorbike riders who chase cheetah if they see them, causing them to die of exhaustion or to leave the area.

Geography:

Climate: Mostly arid or semiarid, subtropical along Caspian coast

Terrain: Rugged, mountainous rim; high, central basin with deserts, mountains and small, discontinuous plains along both coasts.

Natural resources: Petroleum, natural gas, coal, chromium, copper, iron ore, lead, manganese, zinc and sulphur.

Natural hazards: Periodic droughts, floods, dust storms, sandstorms; earthquakes along western border and in the northeast.

Environment-current issues: Air pollution, especially in urban areas, from vehicle emissions, refinery operations and industrial effluents, deforestation, overgrazing, desertification, oil pollution in the Persian Gulf and inadequate supplies of potable water.

Environment-international agreements:

party to: Biodiversity, Climate Change, Desertification, Endangered Species, Hazardous Wastes, Marine Dumping, Nuclear Test Ban, Ozone Layer Protection, Wetlands
signed, but not ratified: Environmental Modification, Law of the Sea, Marine Life Conservation

People:

Ethnic groups: Persian 51%, Azerbaijani 24%, Gilaki and Mazandarani 8%, Kurd 7%, Arab 3%, Lur 2%, Baloch 2%, Turkmen 2%, other 1%

Religions: Shi'a Muslim 89%, Sunni Muslim 10%, Zoroastrian, Jewish, Christian, and Baha'i 1%

Languages: Persian and Persian dialects 58%, Turkic and Turkic dialects 26%, Kurdish 9%, Luri 2%, Balochi 1%, Arabic 1%, Turkish 1%, other 2%

Government:

Data code: IR

Government type: Theocratic republic.

Independence: 1 April 1979 (Islamic Republic of Iran proclaimed).

Legal system: The Constitution codifies Islamic principles of government.

Diplomatic representation in the US: None; note-Iran has an Interests Section in the Pakistani Embassy headed by Fariborz JAHANSUZAN; address: Iranian Interests Section, Pakistani Embassy, 2209 Wisconsin Avenue NW, Washington, DC 20007; telephone: [1] (202) 965-4990

Diplomatic representation from the USA: None; note-protecting power in Iran is Switzerland.

Economy:

Economic-overview: Iran's economy is a mixture of central planning, state ownership of oil and other large enterprises, village agriculture, and small-scale private trading and service ventures. President KHATAMI has continued to follow the market reform plans of former President RAFSANJANI and has indicated that he will pursue diversification of Iran's oil-reliant economy although he has made little progress toward that goal. In the early 1990s, Iran experienced a financial crisis and was forced to reschedule \$15 billion in debt. The strong oil market in 1996 helped ease financial pressures on Iran and allowed for Tehran's timely debt service payments. Iran's financial situation tightened in 1997 and deteriorated further in 1998 because of lower oil prices. As a result Iran has begun to cut imports and fall into arrears on its debt payments.

Labour force-by occupation: Agriculture 33%, manufacturing 21% (1988 est.).

Industries: Petroleum, petrochemicals, textiles, cement and other construction materials, food processing (particularly sugar refining and vegetable oil production), metal fabricating, armaments

Agriculture-products: Wheat, rice, other grains, sugar beets, fruits, nuts, cotton; dairy products, wool and caviar.

Exports: \$12.2 billion (f.o.b., 1998 est.)

Exports-commodities: Petroleum 80%, carpets, fruits, nuts, hides, iron and steel.

Exports-partners: Japan, Italy, Greece, France, Spain and South Korea.

Imports: \$13.8 billion (f.o.b., 1998 est.)

Imports-commodities: Machinery, military supplies, metal works, foodstuffs, pharmaceuticals, technical services and refined oil products.

Imports-partners: Germany, Italy, Japan, UAE, UK, Belgium.

Currency: 10 Iranian rials (IR) = 1 toman; note-domestic figures are generally referred to in terms of the toman.

Exchange rates: Iranian rials (IR) per US\$1-1,754.63 (January 1999), 1,751.86 (1998), 1,752.92 (1997), 1,750.76 (1996), 1,747.93 (1995), 1,748.75 (1994); black market rate: 8,000 rials per US\$1 (July 2002); note-as of May 1995, the "official rate" of 1,750 rials per US\$1 is used for imports of essential goods and services and for oil exports, whereas the "official export rate" of 3,000 rials per US\$1 is used for non-oil exports and imports not covered by the official rate

Communication:

1. Telephone system:

- **Domestic:** 25 regional telecommunications authorities created in 1996; these authorities are responsible for implementing paging services and cellular systems; microwave radio relay extends throughout the country with the system centered in Tehran; system is moving toward digitisation and direct-dial capability; 255 long-distance circuits (1999 est.); 366 telephone exchanges (1995 est.); 204,400 microwave channels (1996 est.); 230,000 cellular telephone subscribers (1997 est.); 3,930 pager subscribers (1995 est.)
- **International:**
13,985 international circuits (1999 est.) with a plan to reach 14,000 by March 1999; satellite earth stations-9 Intelsat (with 50 terminals) and 4 Inmarsat; HF radio and microwave radio relay to Turkey, Azerbaijan, Pakistan, Afghanistan, Turkmenistan, Syria, Kuwait, Tajikistan, and Uzbekistan; submarine fiber-optic cable to UAE with access to Fiber-Optic Link Around the Globe (FLAG); Trans Asia Europe (TAE) fiber-optic line runs from Azerbaijan through the northern portion of Iran to Turkmenistan with expansion to Georgia and Azerbaijan; four Internet service providers as of 1997 with the number increasing (service limited to electronic mail to promote Iranian culture)

2. Radio broadcast stations: AM 72, FM 6, shortwave 5 (1998 est.)

3. Television broadcast stations: 28 (in addition, there are 450 low-power repeaters, all government controlled)

Marker, Laurie, 1998.

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Actions and Conservation Activities for the Iranian Cheetah

Behzad Rahgoshai, Executive Deputy of CACP, Pardisan Eco Park, Iran

Background

The last of the Asiatic cheetah (*Acinonyx jubatus venaticus*) are now found primarily in Iran, with a population estimate of less than 50 individuals. Once ranging from the Red Sea to India, the few remaining Asiatic cheetah are found on the edge of Iran's Kavir Desert, where suitable prey is very scarce. Cheetah numbers have declined from around 500 animals in the 1970s due to widespread poaching of cheetah and their prey during the early years of the 1978 revolution. Additionally, habitat degradation due to livestock grazing, have pushed this important predator to the brink of extinction. Historically cheetah have played a significant role in Iranian culture, trained in ancient times by emperors to hunt gazelles.

The Department of Environment (DOE) and United Nations Development Programme (UNDP) Global Environmental Facility (GEF) recently signed a grant entitled, "Conservation of the Asiatic Cheetah, its Natural Habitat and Associated Biota in the I.R. of Iran" (CAC). The purpose of the grant is to secure the conservation of the Asiatic cheetah in the I.R. of Iran and the related complex of rare and endangered wild species and their natural habitats with the support and collaboration of local communities. This is to be achieved through a combination of collaborative management, education and awareness building, and direct action to improve enforcement of laws and regulations.

In September, 2001, field researchers George Schaller and Tim O'Brien from New York Bronx Zoo's Wildlife Conservation Society (WCS) spent six weeks in I.R. of Iran conducting baseline studies in three of the four areas where cheetah are reported. During the WCS visit, trip cameras were placed in the field to begin to gather data on the species in the regions where cheetah are found. While we were there a photo from one of the trip cameras was of a cheetah, and one of the field staff saw a wild cheetah about 50 km from where the cheetah was photographed with the trip camera. There are currently six trip cameras in the Naybandan protected area. There are security issues in this area, and neither WCS nor CCF were permitted to travel there.

Subsequent to the WCS visit, in November 2001 Laurie Marker and Cynthia Olson from the Cheetah Conservation Fund conducted follow-up meetings with the core cheetah interest group that has developed, which included DOE, UNDP, and various individuals and NGO's. From what we have learned over the past several years in communications with many people and from Dr. Schaller's recent observations, immediate conservation actions must be taken in I.R. of Iran as their cheetah population is gravely threatened with extinction. Then in April 2002, Dr. Gus Mills conducted a field visit to Iran to look at the interactions between cheetah, hyena and prey.

During the last 6 months the following activities were undertaken by the secretariat for Conservation of Asiatic cheetah in Iran:

1. Carried out activities for promoting the status of selected sites that are the main habitats of Asiatic Cheetah in Iran, as follows:
 - Promoted the status of the Naybandan from Protected area to Wildlife refuge with the area of 1,500,000 ha.
 - Promoted the status of the Dar Anjir from Hunting Prohibited area to Protected area with the area of 15,000 ha.
 - Promoted the status of the Khartooran from Wildlife Refuge to National Park with the area of 800,000 ha.

2. Controlled illegal poaching of cheetah and increase the fine from US\$ 2 500 to US\$ 12 500.
3. Project secretariat was visited by many international experts during last 6 months (about 136 persons per day) and organized to visit selected sites of the Project.
4. Took about 700 pictures (including 2 pictures of cheetah in Naybandan, 5 pictures of King fox in Naybandan, 17 pictures of hyena in Naybandan and Khartooran) by 6 camera traps.
5. Recognised traditional water and grazing rights in parks and protected areas and started to buy up such as Majerat in Khartooran National Park.
6. Hire and train and deploy 25 game guards for strengthening conservation issues in the parks and protected areas.
7. Prepared GIS maps with the collaboration of WCS and DoE experts for selected sites.
8. Studied the behaviour of the hyena as one of the important rivals in the Wildlife Refuge of Naybandan.
9. Prepared necessary equipment for the game guards
10. Purchased 3 vehicles for the selected sites.
11. Allocated 13 motorcycles for the selected sites.
12. Collaborated with WCS, CCF, IUCN and Cheetah Breeding Research Centre in Dubai.
13. Visited CCF in Namibia for initial training in telemetry and animal handling techniques.
14. Established and equipped 5 new guard stations in Naybandan and Khartooran.
15. Prepared 1:100,000 maps for the protected areas.
16. Initiated public awareness activities to promote conservation activities related to the project goals including brochure and a cheetah calendar (in 5000 triages).
17. Tracked Cheetah and its rivals inside the selected sites.
18. Collected 28 skeletons of preys, which were killed by cheetah.
19. Developed a www.asiaticcheetah.org website.
20. Held 3 workshops for training the game guards.
21. Worked with one of the NGO's (ICS) in collaborative management purposes inside the selected sites and Tehran.
22. Collected and compiled about 250 pages daily reports of guards in CACP secretariat.
23. Prepared ~ 15 hours' movie and ~ 1800 pictures of all the missions inside the selected sites.
24. Establish an archive of the movies and pictures.
25. Reported sightings of about 27 cheetah in the selected sites by the game guards during last two months.
26. Translated all the reports and correspondence into Farsi.

As a result of the above-mentioned achievements, the secretariat received the support of the President of Republic for considering the conservation of Asiatic cheetah as a high priority. The project activities caused the following influences on conservation of Asiatic cheetah in its natural habitat:

- The number of game guards increased about 70% in the selected sites.
- The number of vehicles and motorcycles increased about 50% inside the selected sites.
- The number of necessary equipment increased about 100% for the guard stations in the selected sites.
- The number of field visits by experts increased by about 300% inside the selected sites.
- The number of the guard stations increased about 60% inside the selected sites.
- The number of the general directors visits from provinces increased about 300% inside the selected sites.

The number of UN and DoE representatives visits increased during this period, which is caused lots of, encourages for the game guards in the selected sites.

Optimising Cheetah Conservation Action Through Efficient Biomaterial Banking and Use

Dr. Paul Bartels, Director, Wildlife Biological Resource Centre of the Endangered Wildlife Trust

Why bank biomaterials? Because many conservation actions rely on the utilisation of knowledge gained from analysing biomaterials collected from wildlife species.

Most biologists, researchers and managers collect biomaterials from animals as part of their work, be it for conservation genetics, reproduction, disease or general physiology studies. Most of these biomaterials are either discarded after use or poorly managed, even though they represent a potentially valuable future genetic resource.

South Africa does not as yet optimally utilise its cheetah biomaterial resources. There is little or no coordination between stakeholders as well as between the multidisciplinary users involved with cheetah conservation, research and management. Biomaterials consist of any tissue, fluids or products derived from wildlife, such as blood, sperm, embryos, hair, horn, fat, and other tissue.

The wBRC and CBSG South Africa recently held the first International Biological Resource Banking (BRB) workshop. Fifty-one people, representing a wide stakeholder group comprising researchers, owners, managers and policy makers attended the three day multidisciplinary workshop. Five working groups formed which dealt with Policy and Legislation, Disease-risk, Information Technology, Conservation Genetics and Reproductive Technology.

At the end of the workshop, one of the overriding feelings was that this workshop had come at a critical time and that the issue of Africa's wildlife genetic resources and their use is recognised as a national asset which needs to be well managed and utilised to benefit the people of southern Africa.

In addition to its biobanking role, the wBRC is also a research facility. In the past, our research focussed primarily on Assisted Reproductive Technology. Recently, however, we have broadened our focus and our laboratories are now investigating a number of different methods for developing and preserving cell cultures from tissue biopsies derived from wildlife species, including cheetah. Cryopreserved cell cultures represent a renewable genetic resource that can be transported anywhere and used anytime in the future for molecular and cell biology research, even cloning, should the need ever arise. However, when collecting samples in the field for cell culture purposes, it is not always possible to transport tissue biopsies to a laboratory in time to establish viable cell lines under suitably sterile conditions. We are therefore researching methods of freezing biopsies in the field, which would allow us to establish cheetah cell lines at a later date, under more favourable cell culture conditions. Our first research publication on field biopsy freezing, due out in January 2003, was conducted on lion biopsies.

Cheetah reproductive work continues, with the banking of cheetah sperm and the development of artificial insemination techniques. Cheetah meta-population management is problematic and it is felt that artificial insemination may be a way of bringing "new blood" into isolated cheetah populations. Blood has also been banked for disease surveillance purposes, including Feline Immuno-deficiency Virus (FIV) determination. The wBRC has been working with the National Cheetah Management Programme and De Wildt Cheetah Centre on cheetah biomaterial collection and banking.

The wBRC's activities have also broadened into the field of genetics. The wBRC has established a wildlife genetics service laboratory at the Centre. The relentless expansion of human settlement and industrial regions has led to extensive fragmentation of natural wildlife habitat, and both animal and plant populations have therefore increasingly become isolated. Historical animal migration routes have been cut off, and availability of mates is restricted in most small populations. The threat of inbreeding depression (which leads, for example, to reproductive problems and increased susceptibility to disease) is a genuine concern for private game owners, governmental conservation departments and captive breeding organisations alike. Successful management of such fragmented populations increasingly requires knowledge and understanding of the genetics of each population. The wBRC's dedicated Genetics Service Laboratory will provide a service to a wide range of conservation-orientated organisations, including game owners and farmers, Departments of Nature Conservation, Parks Boards, wildlife breeding and rehabilitation centres, zoos and wildlife insurance companies. These organisations have all indicated a need for a DNA service laboratory, either to determine paternity and levels of inbreeding, or to identify individuals uniquely for forensic and/or insurance purposes.

The wBRC can be contacted at: Tel (012) 305-5840 or info@wbrc.org.za

Status and Distribution of the Cheetah in the Thabazimbi District of the Limpopo Province of South Africa

Kelly Wilson, Centre for Wildlife Management, University of Pretoria, South Africa

A cheetah survey was conducted in the Thabazimbi District of the Limpopo Province, South Africa. Cheetah were surveyed using the interview method. Farmers and ranchers were interviewed on their properties using a standardized questionnaire. Questions were asked concerning farming practices, cheetah sightings, perceptions of cheetah numbers and attitude towards cheetah. A sample of 199 farmers/ranchers was interviewed supplying information for 366 different farms/ranches. Of these respondents, 39% had sighted cheetah on their properties recently. Cheetah numbers were thought to be increasing by 72% of the ranchers that had sighted cheetah on their property. Cheetah were considered a liability by 71% of the respondents. Of a total of 240 cheetah sightings recorded, 49% were of lone cheetah. The largest group size reported comprised eight cheetah. A total of 20 sightings of females with cubs were recorded. An estimated population size of 42 - 63 individuals was obtained for the District and an estimated density of 0.6 cheetah per 100 km² was calculated.

The IUCN/SSC Cat Specialist Group - Who we are, What we do and What we Would Like to do

Christine Breitenmoser-Würsten, co-chair, The IUCN/SSC Cat Specialist Group

The IUCN/SSC Cat Specialist Group consists of the world's leading scientists and wildlife managers involved with the 36 species of wild cats in more than 50 countries. It is one of over 120 similar groups of scientists and other specialists from all over the world forming part of the Species Survival Commission (SSC) of the World Conservation Union (IUCN). All specialist group members serve as honorary advisers to the Union. The specialist groups do not primarily administer projects nor act as funding agencies, but try wherever possible to assist the work of the members and provide them with services. In their individual capacities, all Cat Specialist Group members are involved in the development and implementation of conservation programmes and projects. The main tasks of the specialist groups are to assess the species' status, review the conservation needs and recommend conservation actions and networking.

The IUCN/SSC Cat SG has the following organisation and bodies to fulfil these tasks:

- **The Chair** (presently co-chairs Christine Breitenmoser-Würsten and Urs Breitenmoser with Peter Jackson as advisor to the chair) is the responsible executive body of the group. The chair has to administer the group, communicate internally and externally, provide services to the members, initiate and supervise group activities and tasks, further capacity building, and help with networking and facilitating where needed.

The Core Group: Is the strategic board of the Cat SG. It is the team to identify priorities, to develop cat conservation concepts, and to supervise the permanent tasks of the Cat SG (update status reports, red list, etc.). The CG tries to meet once a year in a different place of the world. These regular meetings have two goals:

- 1) To push the group's common and lasting business, and
- 2) To meet with the Cat SG members of the region and to review the status and the conservation needs of the regional cat populations. The core group has currently besides the co-chairs and the advisor to the chair the following members: Sarah Christie, Peter Crawshaw, Rodney Jackson, A.J.T. Johnsingh, Ullas Karanth, Laurie Marker, Tom McCarthy, Gus Mills, Dale Miquelle, Kristin Nowell, Steve O'Brien, Alan Rabinowitz, Jim Sanderson, Mel Sunquist.

The Red List Authority: One of the yearly duties of the Cat SG is to review and to update the IUCN/SSC Red List as needed. Kristin Nowell was nominated the Red List authority for the Cat SG.

Sub-groups: Are recognised sub-units of the Cat SG focussing on certain species, regions, or topics. The Cat SG welcomes subgroups as they help to facilitate communication and networking. There are two type of groups associated with the Cat SG:

- **Working group:** subunit made up of Cat SG members. Working groups help to facilitate the work of the Cat SG, as e.g. the assessment of the status of the species they are working on. Example: Andean Mountain Cat Working Group. The working groups will enhance the cooperation of the Cat SG members included. They can be rather informal. Working groups can also be groups covering the cat species of a whole region.
- **Partner group:** group of people working in cat conservation where not all people to qualify for Cat SG membership. They are larger groups including different fields of expertise. The

relationship with partner groups helps to make cat conservation activities more coordinated and more effective and to avoid duplicated efforts. With partner groups a formal agreement will be signed in form of a MoU, as coordination regarding policy statements is needed. Part of the members of the steering committee should be Cat SG members to ensure a direct communication with the Cat SG co-chairs.

- Members of the Cat SG are cat specialists from the whole world. The membership is on invitation only and expires after every quadrennial. Members should be active in cat conservation and ready to contribute to the group activities. Members must provide a *curriculum* and a publication list on their admission, and they should provide the chair with an annual feedback. Currently the Cat SG has some 200 members from 41 countries.
- The Friends of the Cat Group are individuals subscribing to *Cat News*. They are interested in cat conservation and want to support the work of the Cat SG but do not qualify or do not want to apply for full membership.

To be functional, the Cat SG needs communication tools:

- The Members' database facilitates the communication within the group.
- The Cat Project Database compiles "all" ongoing cat conservation projects, but also considers completed and planned projects. The database will build upon the structure developed for the tiger project database and should support the exchange of information (concepts, methods, results) within the cat community and the sponsoring of new projects. It will eventually be available through the Cat SG website.
- A species database is created to assist the continued update of the status reports and the Red List. The species database must be cross-referenced with other internal and external databases. The database structure is respecting the requirements of the SIS (Species Information Service) presently developed by IUCN/SSC.
- The Cat SG digital library is compiling as many cat papers as possible. The main objective is to make the grey literature available to the Cat SG members and other users throughout the world via the internet. The library has currently already over 3500 publications.
- Cat News, the Cat SG's renowned newsletter, is edited by Peter Jackson and appears twice a year. It was first published in 1984, and since then there have been 35 bi-annual issues, providing a wide-ranging collection of scientific papers, articles, and news items on wild cats around the world. Apart from submitted articles, which may be by members of the group or other specialists, the editor solicits special contributions and gathers material throughout the year from journal, magazines and the internet.
- The website of the Cat SG is maintained by Nancy Sipos on a voluntary basis and is hosted on the server of the University of Oslo. It is recognised for its design, but is too static. To incorporate regularly updated databases or interactive tools into the website will require an additional effort and respective funding.

How Suitable is Woodland Savannah and How Important are Protected Areas for Cheetah?

**M.G.L. Mills, SANParks and Endangered Wildlife Trust Carnivore Conservation Group,
South Africa**

The cheetah is known for its speed and prefers open areas to hunt, provided there is some cover for it to get close enough to its prey before chasing. Most of what we know about cheetah behaviour and ecology comes from a range of excellent studies on the Serengeti Plains (e.g. Durant *et al.* 1988; Fitzgibbon 1990; Caro 1994; Laurenson 1994). Here the cheetah's reliance on speed for a short, fast chase after its prey is beautifully illustrated. However, the Serengeti Plains are also home to a large number of other large carnivores, particularly lions and spotted hyaenas, and so it has to cope with high levels of kleptoparasitism and predation on cubs. The openness of the plains makes it easy for other predators to locate cheetah on kills and to find lairs with cubs. As a result of these high rates of kleptoparasitism, principally by spotted hyaenas, and cub mortality, principally by lions, it has been stated that the future of the cheetah may lie outside large conservation areas where there are no competing large carnivores (Marker-Kraus *et al.* 1996; Kelly & Durant 2000).

Recently a number of studies of cheetah have been conducted in savannah woodlands in protected areas (Zank 1995; Hunter 1998; Durant 1998; 2000; Purchase & du Toit 2000; Broomhall 2001). These studies have shown that cheetah are able to hunt successfully in these sub-optimal conditions, preferring the more open areas in woodland savannah and mainly taking the most common medium sized prey (18 – 65 kg) in the area. More importantly, rates of kleptoparasitism and particularly cub mortality are much lower in woodland savannas even where large carnivore densities are high. The availability of cover appears to play an important role in reducing cub mortality by offering protection to mothers, cubs and lair sites. In fact Broomhall (2001) using the model Vortex found that population viability of cheetah in a woodland savannah like the Kruger National Park was greater than in a grassland savannah like the Serengeti Plains. This was particularly evident at small starting populations of around 200.

Cheetah ecology varies across African ecosystems not only as a function of prey density and dispersion patterns, but also cover availability. Cheetah ecology on the Serengeti Plains cannot be considered representative of what happens in most parts of the cheetah's range. It is inadvisable to write off protected areas as important for cheetah conservation. In fact, given their conservation status and the objective of protecting biodiversity, protected areas may still be shown to be the most important areas for cheetah conservation. Other interests such as financial gain from consumptive use and conflict between predators and both domestic animals and wild prey do not compromise cheetah management policies nearly as much in protected areas as in commercial farmland.

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The Status of Cheetah in Botswana

Rebecca Klein, Mokolodi Nature Reserve, Botswana

Introduction:

Mokolodi Nature Reserve is run by the Mokolodi Wildlife Foundation the objectives of which are the propagation of rare and endangered species and conservation education. Mokolodi first became involved with cheetah in 1996 when two orphaned cheetah were brought to our wildlife centre. Their mother had been shot by a farmer in the Ghanzi area. We are now proposing to set up a national cheetah conservation programme in collaboration with Department of Wildlife and National Park's (DWNP) Problem Animal Control Unit and Kalahari Conservation Society one of the largest wildlife NGO's in the country. We are initially proposing to carry out a national survey to assess the status and distribution of cheetah, focusing on their role in predator/livestock conflict.

Status:

Since 1992 the cheetah has been a protected predator species in Botswana that may be hunted or captured only under and in accordance with the terms and conditions of a Director's permit from DWNP (Wildlife Conservation and National Parks Act).

In October 2001 a moratorium was passed outlawing the killing of cheetah and lions as problem animals or for sport hunting. But little is currently done in the way of enforcement.

Nationally there is a large estimated population of 1768 cheetah representing 12% of a world population of 15,000. However, no formal research studies have been undertaken and population estimates are limited to spoor surveys from Central Kalahari Game Reserve and Kgalagadi Transfrontier Park. (Funston et al 2001).

Low densities in protected and wildlife management areas are probably due to competition with lion and hyenas. Where suitable prey occurs in Agricultural zones, cheetah are likely to occur at higher densities. Therefore, estimates for these areas are most likely conservative. As elsewhere, long term survival of the cheetah depends on conservation management in the Agricultural Zones.

Table 1 Tentative estimate of population size

ZONE	AREA km sq	ESTIMATE	MINIMUM	MAXIMUM
Northern Conservation Zone	81561	290	122	457
Southern Conservation Zone	164694	618	479	757
Northern Agricultural Zone	204383	368	155	580
Southern Agricultural Zone	138743	493	208	777
BOTSWANA		1768	965	2571

Current Situation:

Little is really known of the cheetah population in Botswana.

DWNP has a research database which indicates that from 1994 to 1999 farmers killed 70 cheetah. However, the real figure is expected to be much higher. Presently, no compensation is paid for

cheetah. Therefore, cheetah are often misreported as leopard in order to gain compensation. Also, these two species are often confused and many people do not know the difference. In fact the local name lengau refers to both of these species. This results in incorrect reports of the incidences of cheetah deaths. Cheetah have been coming into conflict with farmers and according to initial talks with members of Farmers' Associations they are a significant problem. Reports of problem cheetah are most frequent in the farming areas of Ghanzi District and the Tuli Block in Central District.

Botswana Cheetah Programme:

We will initially focus on a nationwide survey of commercial farms, communal farming areas and game reserves, using a questionnaire survey based on those used successfully in Namibia. This will provide us with a tentative estimate of population numbers and most importantly will give an indication of the distribution of the species and allow priority areas of high cheetah/livestock incidences to be determined. These areas will be focused on for further data collection and intensive educational programmes. We will talk to farmers and rural communities to find out what their problems are exactly and work together with them to come up with appropriate solutions. We will be promoting adequate livestock management and non lethal methods of predator control.

This is intended to be a long-term project for which the main objective will be to ensure the future of sustainable populations of cheetah outside protected areas. After the initial survey, approximately 1-2 years, we intend to carry out further research into home ranges, ecology, and behaviour using radiotelemetry. We will also be collecting samples of blood, tissue, scats, for biomedical and genetic research. We hope this will be done in collaboration with current leading researchers in the field, in order to contribute the Botswanan perspective, to the global understanding of these issues. Educational outreach will be an essential part of the ongoing project. The information gathered at the end of two years will go towards the creation of a nationwide adaptive management plan.

We will respond to complaints of problem animals, and each situation will be assessed individually. Only where absolutely necessary will an animal be relocated, using Mokolodi's cheetah transit station as a temporary holding and quarantine facility. There is FIV seroprevalence in the wild cat population of Botswana, so disease testing will be carried out before any releases to ensure we are not introducing to areas that are FIV free.

We are presently at the stage where the proposal has been approved by all organisations involved and research applications have been accepted. We are now seeking sufficient funding from various sources and will begin the questionnaire survey once this funding has been found. We hope this will be by October 2002. If anyone has any suggestions of organisations to approach please let us know.

Progress Report on Cheetah Disease Research: 2001- 2002

Linda Munson and Karen Terio, University of California, Davis, CA, USA

Since the Global Cheetah Conservation Plan meeting in South Africa in August 2001, we have continued to survey wild Namibian cheetah for diseases through our collaborations with the Cheetah Conservation Fund and Africat, have created closer links with European, South African, and Japanese pathologists, and have continued our investigations on the pathogenesis of gastritis and leukoencephalopathy in cheetah. Specific activities include:

1. Linking with Dr. Nadia Robert in Switzerland. Dr. Robert visited the University of California in the winter of 2001 where we reviewed the histopathology of cheetah diseases in order to standardise our interpretations and scoring of lesions. The structure of the database that has been used since 1988 to track diseases in USA and South African cheetah populations was forwarded to Dr. Robert to institute a similar disease surveillance program in Europe. Dr. Robert has been eliciting pathology information from the entire European community which will be critical to understanding the epidemiology of diseases in captive populations.

2. Dr. Emily Lane received the database of South African diseases that was developed during 1993 and 1996 during my visits to the Faculty of Veterinary Medicine, University of Pretoria in Onderstepoort. The database structure is the same as the one sent to Dr. Robert so that certain diseases could be tracked through captive populations. Dr. Lane will be leading South African efforts to centralize disease information for epidemiological studies.

3. In December 2001, I met with a pathologist from Japan at the American College of Veterinary Pathologist meeting. The Japanese cheetah population also has marked gastritis associated with *Helicobacter*, similar to the situations in Europe, USA and South Africa. They have been investigating the species of bacteria associated with gastritis in this population

4. Dr. Scott Citino (White Oak Conservation Centre), Dr. Karen Terio, and I have continued our investigations on gastritis in cheetah. The multi-year clinical treatment trial for *Helicobacter* conducted by Dr. Citino and I has been completed. The results indicate that treatment has minimal effects on disease progression in most cheetah and that most individuals become reinfected (or have a recrudescence of) *Helicobacter*. In February with funds from the Morris Animal Foundation, Dr. Citino and I brought to the Cheetah Conservation Fund in Namibia an endoscope that was donated by Olympus Corporation for the purpose of surveying wild and captive cheetah populations for gastritis. We spent two weeks training a group of Namibian veterinarians (Dr. Arthur Bagot-Smith, Dr. Mark Jago, Dr. Axel Hartman) on use of the endoscope and gastric biopsy techniques. Eighteen cheetah at CCF were biopsied during the trip. Biopsies have been evaluated for presence and severity of gastritis, and the *Helicobacter* flora will be characterized by molecular methods. Faecal corticoid concentrations will be correlated with gastritis scores. Over the next year, wild and wild-caught cheetah will be biopsied opportunistically by the Namibian veterinarians to determine if the type of *Helicobacter* and corresponding corticoid levels determine whether gastritis occurs in wild-caught cheetah. Biopsies also were received from Africat cheetah through a collaborative project with Dr. Henk Bertschinger, Dr. Remo Lobetti, and Dr. Emily Lane. Evaluation of wild-caught cheetah at CCF and Africa to date has revealed mild and sometimes moderate and severe gastritis, suggesting that gastritis arises principally in captivity. Further analysis of these data will aim to identify what management factors lead to this important disease.

5. We have examined tissues from over 50 necropsies and biopsies of wild cheetah and have rarely found diseases in captive cheetah. In general, the wild population appears healthy. Wild cheetah have abundant *Helicobacter*, but only one animal had gastritis. Molecular analysis of the species of *Helicobacter* in wild and captive cheetah has determined that several similar species of

Helicobacter infect both wild and captive cheetah, but no single species is associated with the development of gastritis. Current investigations are focused on better characterising the host response to these bacteria.

6. We continue to assess the stress response in captive cheetah through faecal corticoid concentrations. Captive cheetah have significantly larger adrenal cortices and 3-4 times higher faecal corticoids than wild cheetah. We have determined that cheetah moved from one zoo to another can have a prolonged (>60 days) significant elevation in corticoids over pre-movement levels, a change that could predispose them to some diseases. We also determined that those animals moved to an on-exhibit facility had the most significant elevations in corticoids, whereas those cheetah moved from an on-exhibit to an off-exhibit facility often had decreased faecal corticoids. We now are investigating the corticoid (stress) response in cheetah that are exercised by the lure system and are correlating corticoid levels to the severity of gastritis.

7. Leukoencephalopathy continues to cause mortalities in USA cheetah over 9 years old. We have been investigating the role of vaccine-source aluminium in the pathogenesis of this disease. To date, there is little evidence that aluminium is a contributing factor.

8. Feline corona viral infections continue to plague the captive USA population. Molecular analysis of cheetah faeces (by Dr. Melissa Kennedy, University of Tennessee) has determined that FECV/FIP can be shed for more than 2 years by chronic carriers. Shedding is intermittent which confounds management practices and hinders captive breeding efforts. We currently are investigating patterns of FECV shedding to better manage this disease in the captive population. Wild cheetah in Namibia also have been exposed to this disease, but morbidity and mortality statistics are not available.

GLOBAL CHEETAH ACTION PLAN REVIEW

REPORT from the WORKSHOP
Held in SOUTH AFRICA
JULY 2002



SECTION 4

WORKING GROUP REPORTS

Health Working Group Report

WORKING GROUP PARTICIPANTS:

- Ulf Tubbesing (Namibia)
- Emily Lane (South Africa)
- Paul Bartels (South Africa)
- Helen Zulch (South Africa)
- Leon Venter (South Africa)
- Adrienne Crosier (USA / Namibia)

INTRODUCTION AND SITUATION OVERVIEW:

Disease, a natural component of the ecology, is only rarely of concern in viable wild cheetah populations. However, there is an increasing number of anthropogenic factors, such as habitat alteration and human interventions that may increase the risk of disease in wild populations.

Some *ex situ* cheetah populations have a high prevalence of unusual diseases (gastritis, hepatic veno-occlusive disease, renal glomerulosclerosis and systemic amyloidosis) that are rare in other species and presumed to be rare in the *in situ* populations. Although the specific cause/s of these diseases are not known, their character implicates stress as an important underlying factor with genetic predisposition and diet as possible confounding factors. These ailments, as well as the poor reproduction status of cheetah in captivity makes the maintenance of self-sustaining captive populations difficult, thus requiring urgent attention.

Although it is *assumed* that these diseases do not affect wild populations, there is concern that they may arise in wild animals that are trapped, held in captive facilities and which are translocated. There is also concern that cheetah may transmit or acquire infectious diseases through these actions. To determine if the diseases of captive animals are universal in cheetah or linked to captive management, broader disease surveillance is necessary. Disease surveillance also is needed to assess the risk of infectious disease transmission during animal translocations.

PROBLEM STATEMENT 1.

ALTHOUGH SOME PROGRESS HAS BEEN MADE, THERE IS STILL INADEQUATE STANDARDISATION OF DATA AND SAMPLE COLLECTION AND ORGANISED COLLABORATION AMONGST INSTITUTIONS. COMPARATIVE HEALTH STATUS STUDIES BETWEEN WILD AND CAPTIVE POPULATIONS ARE DIFFICULT TO CONDUCT BECAUSE SAMPLE COLLECTION, ANALYSIS AND STORAGE HAVE NOT BEEN DONE CONSISTENTLY, AND INFORMATION IS NOT CENTRALISED. COLLABORATION AMONG MANY OF THE ORGANISATIONS THAT HAVE BEEN COLLECTING HEALTH STATUS DATA HAVE NOT BEEN INITIATED OR MAINTAINED. ADEQUATE GLOBAL ACCESS TO PUBLICATIONS AND NEW INFORMATION ON CHEETAH HEALTH IS ALSO LACKING.

SOLUTION 1: DATA COLLECTION AND PROTOCOLS

Complete and distribute standardised protocols, datasheets and sample collection sheets and encourage all people who handle cheetah (whether opportunistically or as part of a research study) to routinely use these protocols.

ACTION STEP 1:

Circulate (by e-mail) a draft datasheet for sample collection for review by all interested parties. Circulate the finalised form to all participants and encourage its use.

RESPONSIBLE: Paul Bartels and Adrienne Crosier

TIMELINE: 31 January 2003

OUTCOME/IMPACT: Finalised electronic form distributed and in use by all sample collectors.

OBSTACLES: Access to e-mail/ internet by field workers, funding for printed forms (triplicate).

ACTION STEP 2:

Develop a booklet and practical courses for sample collection in endangered species, including cheetah. Circulate the health working group with a draft booklet for input.

RESPONSIBLE: Paul Bartels, Laurie Marker, Adrienne Crosier

TIMELINE: 15 February 2003

OUTCOME: Available booklet and course curriculum.

OUTCOME/IMPACT: Finalized electronic form distributed and in use by all sample collectors.

COLLABORATORS: Ulf Tubbesing

OBSTACLES: Access to e-mail / internet by field workers, funding for a printed booklet.

ACTION STEP 3:

Update existing necropsy and biopsy protocols and distribute these to the health group via e-mail for comments and editing. The finalised copy is to be sent to GCF secretariat for circulation to GCF members.

RESPONSIBLE: Linda Munson and Emily Lane

TIMELINE: 31 January 2003

OUTCOME: A cheetah specific necropsy and biopsy protocol is already available.

OUTCOME/IMPACT: Finalised electronic form distributed and in use by all sample collectors.

OBSTACLES: Access to e-mail/ internet by field workers, Funding for printed forms to be distributed to field workers.

SOLUTION 2: SAMPLE COLLECTION AND STORAGE

Optimise sample storage and collection. Archival information from the Cheetah BRB database may be made available via a web site and/or an email interest group list with approval of sample submitters (legal owners). This third party biological bank will maintain biological samples for researchers and managers and may provide samples to others subject to the (*written?*) approval of legal owners.

ACTION STEP 1:

Every member of the health group collecting samples must ensure that the appropriate chain of responsibility is in place to ensure optimal and complete sample collection at every opportunity.

RESPONSIBLE: All health group members.

Timeline: 31 January 2003

Outcome: Finalised electronic form distributed and in use by all sample collectors.

OUTCOME/IMPACT: Standardised and optimised sample collection and storage.

OBSTACLES: Access to e-mail/ internet by field workers, Funding for a printed forms

ACTION STEP 2:

Identify equipment necessary to ensure optimal sample collection and storage (*at various sites of storage – field to BRB*). Locate possible sources for this equipment, obtain quotations and funding that may be necessary to achieve this.

RESPONSIBLE: Paul Bartels and Emily Lane

TIMELINE: 30 June 2003

OUTCOME/IMPACT: Establishment of proper sample storage facilities

OBSTACLES: Availability of funds

ACTION STEP 3:

Write a multi-centre, multinational, biological resource bank collaborative proposal for the collection, storage and management of biological samples. Circulate a list of sample storage facilities to health group members.

RESPONSIBLE: Paul Bartels(wBRC)

TIMELINE: 30 June 2003

OUTCOME/IMPACT: Proposal in place and a list of storage facilities circulated.

ACTION STEP 4:

Establish Cheetah Biological Resource Database to be maintained by the biological resource bank network (Virtual Bank)

RESPONSIBLE: Paul Bartels and Brenda Daly

TIMELINE: December 2003

OUTCOME/IMPACT: Biological Resource Database in place.

COLLABORATORS: Brenda Daly (wBRC)

SOLUTION 3: SAMPLE ANALYSIS

Samples should be submitted to reputable diagnostic laboratories / scientific collaborators for serology, infectious disease surveillance, genetic analysis, reproduction, etc. Identify these sites for reliable sample analysis, circulate and recommend them to researchers and individuals commonly involved in sample collection. The samples should be submitted to these laboratories with the standardised forms (see solution 1). Results from the analysis performed should then be sent to submitters of samples and a confidential copy should be submitted to and stored at the relevant sample storage site. Information may be forwarded to appropriate collaborators and officials with the (*written*) permission of the legal owners.

ACTION STEP:

Regional veterinarians/ researchers will select suitable regional labs for sample analysis. Laboratories with ongoing quality analysis and expertise in felid tests will be selected.

E.g. RSA: Golden Lab and University of Pretoria.

USA: Cornell University and Washington State Diagnostic Laboratory.

Develop a list of recommended laboratories and facilities to be circulated to all regional people doing work on cheetah.

RESPONSIBLE: Emily Lane

TIMELINE: 31 January 2003

OUTCOME/IMPACT: List of labs available

COLLABORATORS: Veterinarians that work on cheetah

PROBLEM STATEMENT 2.

THERE IS A LACK OF ADEQUATE INFORMATION REGARDING THE HEALTH STATUS OF *IN SITU* AND *EX SITU* CHEETAH POPULATIONS GLOBALLY DUE TO PRACTICAL DIFFICULTIES IN ACCESSING ANIMALS AND/OR SAMPLES (LOGISTICS) AND DUE TO A LACK OF COMMUNICATION AMONG RESEARCHERS/ FIELD WORKERS.

SOLUTION 1: HEALTH BIBLIOGRAPHY

Conduct a retrospective survey to collate information from published sources regarding the health status of cheetah. Availability of this information must be assured.

ACTION STEP:

Update and collate literature from all databases. Information will be listed on www.cincyzoo.org until the Cheetah Interest Group web site is developed.

RESPONSIBLE: Bill Swanson and Leon Venter

TIMELINE: 1 February 2003.

OUTCOME/IMPACT: Easy access to current literature concerning cheetah

RESOURCES: Existing literature lists, libraries.

COLLABORATORS: Regional librarians.

OBSTACLES: Access to e-mail / internet by field workers.

SOLUTION 2: PATHOLOGY DATABASE

Update retrospective surveys on archived pathology reports / slides on diseases of wild and captive populations. Availability of this information must be assured.

ACTION STEP 1:

Identify suitable regional pathologists to conduct retrospective surveys on archived pathology slides and reports to add to the existing cheetah pathology database. Standardise interpretation and scoring of lesions.

RESPONSIBLE: Linda Munson, Emily Lane and Nadia Robert.

TIMELINE: 1 March 2003

OUTCOME/IMPACT: Standardised Scoring system in place and retrospective surveys done.

RESOURCES: Pathology laboratories and archived slides.

ACTION STEP 2:

Write a proposal and secure funding for a pathologist to assist Linda Munson in Action Step 1.

RESPONSIBLE: Linda Munson.

TIMELINE: No timeline established.

OUTCOME/IMPACT: Assistant to Dr. Munson appointed with necessary funding.

SOLUTION 3: CLINICAL CASES

Identify clinicians who work with cheetah globally and ensure that they have access to the communications forum of the CIG. Create an electronic platform for the exchange of current issues regarding health (diagnosis, epidemiology, aetiology, prevention and treatment)

ACTION STEP:

Develop an e-mail group of people interested in corresponding on cheetah health. Develop a mechanism of reporting new findings on an Internet-based discussion group and posting existing documents.

RESPONSIBLE: Leon Venter and Adrienne Crosier

TIMELINE: 30 November 2002

OUTCOME/IMPACT: Improved communication and co-operation between people working on cheetah health issues

COLLABORATORS: Ulf Tubbesing

OBSTACLES: Access to e-mail/ internet by field workers

PROBLEM STATEMENT 3.

THE DISEASE STATUS OF WILD CHEETAH POPULATIONS IS NOT WELL CHARACTERISED. THE IMPACT OF DISEASE ON POPULATION DYNAMICS THUS CANNOT BE ASSESSED AND THE DISEASES OF CAPTIVE ANIMALS CANNOT BE PUT INTO PERSPECTIVE. THIS INFORMATION IS ESSENTIAL TO UNDERSTAND THE CAUSES OF DISEASE AND TO MINIMIZE DISEASE RISK AT AN INTERFACE BETWEEN WILD AND CAPTIVE POPULATIONS. THERE IS A NEED TO EVALUATE GENETIC INFLUENCES ON DISEASE.

SOLUTION 1: WILD POPULATION DISEASE SURVEILLANCE

Whenever access to wild cheetah is possible, conduct disease surveillance using standardised methods in all range countries. Once ethical and safety issues have been addressed, these studies should, in addition to a full clinical work-up, be expanded to, when practically feasible, include kidney and liver biopsies. Studies involving the collection of gastric biopsy samples in range countries should be continued. These studies should be conducted on cheetah in range countries to determine the health status of the wild population. It is considered to be of particular importance to biopsy older cheetah, individuals that have previously been caught and cheetah with signs of disease. Diseases should be compared among regions and populations. Availability of this information must be assured.

ACTION STEP 1:

Establish an ethical and safe, minimally invasive liver and kidney biopsy procedure.

RESPONSIBLE: Ulf Tubbesing

TIMELINE: 31 January 2003

OUTCOME/IMPACT: Collection of improved quality diagnostic samples from a much bigger pool of free-ranging cheetah than would be possible from killed cheetah (hunted & road kills) to add to our knowledge of renal and liver disease in free-ranging cheetah.

RESOURCES: Equipment currently available but may need to acquire circular punch biopsy equipment. The pilot study will be performed at own cost.

COLLABORATORS: Various field veterinarians to be trained in the biopsy techniques once well established and accepted as ethical and safe.

OBSTACLES: Funding and possible objections on ethical grounds

ACTION STEP 2:

Continue studies involving gastric biopsies in range countries should be continued.

RESPONSIBLE: Linda Munson, Scott Citino, Remo Lobetti, Emily Lane

TIMELINE: Ongoing

RESOURCES: Endoscopes and equipment available in the various centres.

COLLABORATORS: Drs. Jago, Hartmann, Bagot-Smith and Tubbesing

ACTION STEP 3:

Formalise methodology for the ageing cheetah.

RESPONSIBLE: Ulf Tubbesing

TIMELINE: 30 November 2002

OUTCOME/IMPACT: More uniform and accurate ageing of cheetah

COLLABORATORS: Bonnie Schumann

ACTION STEP 4:

Continue and promote the training of in-country field personnel in necropsy techniques and collection of biomaterials from live animals. As far as possible, regional veterinarians should conduct the training.

RESPONSIBLE: Ulf Tubessing, Adrienne Crosier and Paul Bartels.

TIMELINE: 15 February 2003

OUTCOME/IMPACT: Improved and consistent sample collection, handling and storage.

RESOURCES: Training manuals, workshops and provide sample collection kits.

COLLABORATORS: Other veterinarians.

OBSTACLES: Funding for materials and manuals.

SOLUTION 2: REPRODUCTION

Establish a database of normal reproductive traits of wild cheetah.

ACTION STEP 1:

Continue biomaterial (semen, blood, vaginal smears) collection and analysis on wild caught cheetah.

RESPONSIBLE: Adrienne Crosier, Paul Bartels

TIMELINE: Continuous

OUTCOME/IMPACT: Normal reproductive parameters database established

ACTION STEP 2:

Coordinate the training for biomaterial collection and banking of wild caught cheetah.

RESPONSIBLE: Adrienne Crosier, Paul Bartels, Dave Wildt, Laurie Marker

TIMELINE: 28 February 2003

SOLUTION 3: DIET ANALYSIS

Conduct a diet analysis, assessing the prey composition of wild cheetah diets through qualitative scat analysis.

ACTION STEP:

Contact people who have been working on captive and wild diets to determine status of current information and source of that information. These people include:

- Wilhelm Schultheiss
- Ellen Dierenfeld
- Mary Allen
- Peter Rogers
- Willie Labuschagne

Link with Laurie Marker / Gus Mills concerning their planned project to determine prey species from faecal analysis. Find out what current information regarding prey species is available from field ecologists. Collate all this information to determine if further work should be done.

RESPONSIBLE: Glen Carlisle, Leon Venter, Laurie Marker

TIMELINE: 31 January 2003

OUTCOME/IMPACT: Status of knowledge of captive and wild diets available

RESOURCES: People listed

COLLABORATORS: People listed

PROBLEM STATEMENT 4.

THERE IS A LACK OF UNDERSTANDING CONCERNING THE IMPACT OF MANAGEMENT PRACTICES ON HEALTH, REPRODUCTION AND LONGEVITY IN *EX SITU* POPULATIONS. IT IS NOT KNOWN IF THE HEALTH PROBLEMS IDENTIFIED IN SOUTH AFRICAN AND USA POPULATIONS ARE ALSO PRESENT IN THE NAMIBIAN, AUSTRALIAN, EUROPEAN AND ASIAN *EX SITU* POPULATIONS. THERE ARE CONCERNS THAT FACTORS SUCH AS SMALL ENCLOSURE SIZE, INAPPROPRIATE DIET, HUMAN CONTACT OR PROXIMITY TO OTHER PREDATORS MAY CAUSE STRESS IN *EX SITU* ANIMALS AND THUS POSSIBLY INCREASE THE PREVALENCE AND SEVERITY OF DISEASE. THERE IS A NEED TO EVALUATE MANAGEMENT PRACTICES FOR THE CAPTURE, TRANSPORTATION, AND HOLDING OF *IN SITU* AND *EX SITU* CHEETAH AND CORRELATE THESE WITH DISEASE PREVALENCE THROUGH EPIDEMIOLOGICAL ANALYSES. FURTHERMORE, AN ALTERNATIVE, EASY AND RELIABLE MEASUREMENT OF STRESS IS NEEDED TO HELP ASSESS THE RELATIONSHIP BETWEEN STRESS, MANAGEMENT AND DISEASE. ONCE RESULTS FROM THE ABOVE INVESTIGATIONS ARE AVAILABLE, A SET OF PROTOCOLS AND GUIDELINES FOR THE OPTIMAL MANAGEMENT OF CHEETAH NEEDS TO BE DEVELOPED.

SOLUTION 1: CAPTIVE POPULATION DISEASE SURVEILLANCE

Continue and update captive population disease surveillance. Health status data should be collected for comparative purposes from a wide range of African, European and Australian facilities using standardised surveillance methods. Many regions now have zoo organisations that can facilitate data/sample collection among member institutions. Data should then be compared among regions and facilities.

ACTION STEP:

Continue surveillance with designated pathologist and coordinate findings in various regions.

RESPONSIBLE: Linda Munson and Emily Lane.

TIMELINE: Continuous

SOLUTION 2: MANAGEMENT CONDITIONS

A comprehensive assessment of the management conditions of captive cheetah should be conducted using a standardised evaluation form that includes information on exhibit site and structure including but not limited to proximity to predators, size of enclosure, exhibit substrate and design, public access, enrichment activities, exercise, diet, staff expertise, and veterinary care.

ACTION STEP 1:

List the potential management factors to be assessed and possible categories to score these factors. Collaborate with ecologists in the selection of *in situ* factors. Consider the guidelines developed for the AZA survey (Jill Mellen) for *ex situ* factors. Criteria will be reviewed by e-mail.

RESPONSIBLE: Helen Zulch

TIMELINE: 31 January 2003

ACTION STEP 2:

Conduct risk factor assessment using the criteria developed above and correlate these with pathology findings from retrospective and prospective pathology survey results. Disease prevalence and reproductive success should be analysed with respect to age, facilities, enclosure

privacy, exposure to the public, diet, exercise, genetic background, level of stress and exposure to environmental toxins such as estrogens.

RESPONSIBLE: Linda Munson

TIMELINE: August 2004

SOLUTION 3: STRESS ASSESSMENT

A system of scoring stress should be developed.

ACTION STEP:

Develop a stress assessment scoring system and make this available to ICF.

RESPONSIBLE: Helen Zulch

TIMELINE: 31 March 2003

OUTCOME/IMPACT: Standardised stress assessment system in place.

SOLUTION 4: REPRODUCTION

Critically evaluate different breeding management methods to identify the most important factors affecting reproductive behaviour, reproductive success and cub survival. Utilise data gathered from the wild population for comparison.

ACTION STEP:

Detail the factors to be assessed and correlate these with reproductive success. Link this with information derived from the proposed workshop in the USA on factors affecting reproductive success in wildlife.

RESPONSIBLE: JoGayle Howard, Adrienne Crosier, Henk Bertschinger

TIMELINE: 31 July 2003

Censusing Cheetah Working Group Report

WORKING GROUP PARTICIPANTS:

- **Martin Mulama:** Kenya Wildlife Services (KWS) co-ordinator of cheetah conservation activities in Kenya for the last 2 years.
- **Kelly Wilson:** Centre for Wildlife Management, University of Pretoria, studying status and distribution of cheetah in Thabazimbi District.
- **Arthur Bagot-Smith:** Private veterinarian with personal interest in cheetah and long term association with CCF (Namibia).
- **Sarah Durant:** Zoological Society of London and Tanzanian Wildlife Research Institute, head of the Tanzania Cheetah Conservation Programme and 11 years' experience in running the Serengeti Cheetah Project, a long-term field study of wild cheetah in the Serengeti.

EXECUTIVE SUMMARY:

The **Census Working Group** was established in 2001 at the first Cheetah Action Plan Workshop to address an increasingly urgent need for good quantitative information on distribution and numbers of cheetah across Africa. At present reliable quantitative data on population distribution and trends in cheetah are rare. Yet without such data we are unable to identify and address threats to the long-term survival of cheetah or test the effectiveness of conservation actions. These data are also vital for persuading governments and other key stakeholders to adopt appropriate conservation measures that are crucial to the long-term survival of the species in the wild. Unfortunately cheetah are particularly difficult to census using conventional techniques and current estimates of global population size for cheetah are nearly entirely based on questionnaire data. These data are problematic for several reasons, including the unusual ecological and behavioural characteristics of cheetah, but also because interviewees, such as landowners and game wardens, often have a vested interest in exaggerating the number of cheetah on their land. Thus, it is impossible to draw any firm conclusions about overall numbers from questionnaire data.

The Census Working Group set as its overall objective the identification of key techniques that can be used to census cheetah across a variety of different habitats. The group made a number of recommendations targeted at meeting this objective. As a priority, they felt that there was an urgent need for a workshop that could bring together individuals responsible for cheetah censusing from as many cheetah range states as possible, together with experts in key census techniques. This workshop would compile a shortlist of key techniques for testing in the field and for each one devise an appropriate methodology for the cheetah situation. Techniques found to be effective after field testing will be used for censusing cheetah across as many countries and as different habitats as possible. The group noted the need to raise awareness of the need for information on cheetah numbers within the donor community, in order to secure funding for these activities.

As potential cheetah habitat continues to become degraded and lost to conservation, establishing the status of cheetah in Africa becomes an increasingly urgent priority. The action steps outlined by this working group serve to establish techniques to carry out this task. Without standardised, replicable techniques to census cheetah populations across a wide range of habitats there is little hope of appropriately prioritising conservation efforts for cheetah or assessing the effectiveness of

such actions. As such the proposed steps represent a major first step on the path for establishing long term and systematic monitoring of cheetah populations across Africa.

SITUATION OVERVIEW:

A PROPER AND ACCURATE CENSUS OF CHEETAH HAS NEVER BEEN DONE. THERE SEEMS TO BE NO QUICK AND RELIABLE METHOD OF COUNTING CHEETAH.

Cheetah have a number of characteristics that make them particularly difficult to count:

- They are largely non-territorial. This means that they do not pick prominent locations for scent marking, making it difficult to count signs. In addition a simple estimate of area divided by mean territory size cannot be made.
- They are very mobile, moving many kilometres a day, and have extremely large home ranges. Therefore they can easily move across different farms from one day to another, making it difficult to estimate numbers from questionnaire data.
- They are commonly very shy either because of persecution or because they are not used to vehicles. Habituating cheetah through following in vehicles can be dangerous in many areas as this may render them more vulnerable to persecution.
- They form local transitory hotspots, either due to land-use issues such as game fenced areas, or the position of trees used for scent-marking, which are also known as 'playtrees'. These give an impression of many cheetah in an area, but these hotspots are completely non-representative of overall density.
- They are cryptic and hence are hard to find, and they are at low densities wherever they occur.

Because of these problems which are implicitly associated with cheetah we have identified a number of priorities where we need advances in order to gain reliable estimates of numbers. These are listed in order of priority:

TECHNIQUES

Without an easy and accurate technique for counting cheetah we cannot gain any estimate of numbers. The techniques presently available include:

- **Mark-recapture based either on individual recognition or by marking and releasing individuals:** This is perhaps the most reliable method, but it depends on a sufficient proportion of individuals being identified or marked. Often there are biases in which individuals are identified or marked. Only tame individuals can easily be photographed for individual recognition, whilst trapping for marking tends to target males or young cheetah, as these are more commonly caught in traps. Trapping is also likely to be extremely stressful for cheetah. Finally cheetah populations often violate the assumptions of mark-recapture analysis, and whilst there are analytical techniques to deal with this, they depend on large sample size, and many years of data.
- **Whole population marking or identification:** This is the most accurate of methods, but is extremely labour intensive and expensive. In situations when cheetah are rarely seen, and the technique depends on trapping and radio collaring it is difficult to determine whether the whole population has been sampled.
- **Estimates via spoor frequency:** This technique is still under development. It shows promise but needs calibration under a wide range of conditions.
- **Use of DNA techniques (e.g. faecal, hair snare etc.):** Because most cheetah are non-territorial, and do not have habitual trails or scent-mark in prominent locations it can be easier to find a cheetah itself than find its scat or hair. However it may be possible to find scat more

effectively by using dogs trained to locate scat by smell. These techniques are likely to result in biases towards males, since these most commonly scent mark, and the DNA analyses necessary to identify individuals can be expensive.

- **Camera-trapping techniques:** As with DNA techniques, camera trapping works best with species which use habitual trails or scent-marking locations. Cheetah are very mobile, low density, and move fairly randomly through a region.
- **Questionnaire data:** Either from farmers and game wardens, or from tourists or the public. This is the method most commonly used to estimate cheetah densities, but there are a number of problems with these techniques that are related to the aspects of cheetah behaviour listed above. Landowners often have a vested interest in exaggerating the number of cheetah on their land. It was the belief of the group that whilst questionnaire data can provide useful information on cheetah distribution, estimates of population size made from questionnaire data alone are likely to be fundamentally flawed.

Because of the problems with all these techniques, a new and accurate technique for counting cheetah is the most urgent priority.

STANDARDISATION

If we able to identify a suitable technique for counting cheetah, we will then need to standardise it so that results can be compared across different habitats and in different countries. There is currently no established universal method of long-term monitoring, and in many range countries there is a lack of resources and infrastructure for research. In particular there is:

- A lack of in-depth studies in different habitat types
- A lack of knowledge and information in areas where cheetah seem particularly scarce.

RESOURCES

All methods will depend on sufficient resources including personnel.

CO-OPERATION

Any suitable technique should ultimately be used to estimate cheetah densities across a broad range of habitats and land use patterns. If we are to do this we will need access to areas where cheetah occur:

- In many range states most cheetah occur on private land. Permission needs to be obtained to gain access to this land.
- Landowner personalities differ among different range states, and these need to be taken in consideration when asking for co-operation.
- Many range states make use of game fencing, and this can alter densities in particular areas.
- There is often a lack of education /awareness about the importance of censusing cheetah.

EDUCATION

There is a lack of trained personnel in many range states. There is likely to be a need for specific training in census methodology for each situation.

SUMMARY

There are numerous difficulties associated with the censusing of cheetah, which vary depending on country, region, habitat type, cheetah density and landowner attitudes. The aim is to now work together to determine the most accurate technique, or combination of techniques, that can give relatively accurate indication of cheetah numbers or trends in different areas. One of the most important steps will be to calibrate existing techniques to find indirect indices which can be used across habitats.

ULTIMATE LONG-TERM AIM

To develop a reliable, cost effective, long-term and repeatable census methodology that can be used across a broad range of habitats and in areas where cheetah are rarely seen. This method then needs to be used on a long-term basis to gain accurate data regarding population status and trends, with in-depth information on viability in selected representative habitats.

PROBLEM STATEMENT 1.

WITHOUT AN EASY, ACCURATE AND RECOGNISED TECHNIQUE FOR COUNTING CHEETAH WE CANNOT GAIN ANY ESTIMATES OF NUMBERS OR POPULATION TRENDS. HENCE WE CANNOT ASSESS THE EFFECTIVENESS OF ANY CONSERVATION ACTIONS.

SOLUTION:

Convene a workshop to identify possible techniques.

The goal of this workshop will be to identify techniques to census cheetah for conservation management. The workshop will be held under the auspices of the CIG Census Working Group. It must have a sound scientific basis and should bring in expertise in all censusing techniques for predators. The workshop should be located in a country where it will be perceived as being unbiased and not linked to any particular organisation with vested interests in inflating/deflating estimates of numbers. The outputs of the workshop should be recognised and accepted by regulating authorities and the scientific community. The workshop will motivate and mobilise individuals within range states to conduct surveys.

The workshop will include all individuals with responsibilities for censusing cheetah in range states. Efforts will be made to include individuals from as many cheetah range states as possible. In addition, we have identified eight areas of expertise where advice is needed together with possible experts in these fields:

1. Camera trapping techniques

Possible expert (1): Ullas Karanth

2. Scat sniffing dogs

Possible expert (1): Megan Parker, Sam Wasser

3. Mark/recapture analysis

Possible expert (1): Ray Hilborn, Gary White

4. Questionnaire surveys

Possible expert (1): Kathy Homewood will be asked for suggestions

5. DNA analysis

Possible experts (2 - one expert in extraction techniques from scat, and one expert in translating results to population estimation): Dada Gottelli (extraction techniques – experienced with cheetah scat), Warren Johnston, Laura Farrel, Terry Robinson (population estimation).

6. GIS experts

Possible expert: One of either Eric Sanderson or Albert van Jaarsveld

7. Spoor counts

Possible expert: Flip Stander

8. Statistical techniques

Possible expert: One of either Berty van Hensberg or Ray Hilborn

This group also recognised that there is a wide area of expertise in puma research and a role-player from this group could also be identified.

Minimum goal: Hold workshop

Maximum goal: As above

ACTION STEP 1:

Raise resources for workshop.

Laurie Marker has promise of \$10 000 from USA Fish and Wildlife Service, there is a possibility of matching funding from World Wildlife Fund. A&K will be approached to assist with travel and accommodation - Kusini Tented Camp in southern Serengeti, Tanzania, is a potential venue for the workshop.

RESPONSIBLE: Laurie Marker and Sarah Durant.

TIMELINE: May 2003

RESOURCES: Estimated \$20 000 and personnel to organise the agenda, travel and accommodation.

COLLABORATORS: Members of the working group

MEASURABLE OUTCOMES: Resources available.

OBSTACLES: Insufficient donor interest.

ACTION STEP 2:

Hold workshop

RESPONSIBLE: Laurie Marker and Sarah Durant

TIMELINE: May 2003

RESOURCES: Estimated \$20000

COLLABORATORS: Members of the working group

MEASURABLE OUTCOMES:

A final report from the workshop will:

- Prioritise techniques to be tested in the field.
- Identify areas for testing techniques.
- Select representative habitats for trailing techniques.
- Set a time frame for all actions.

OBSTACLES: Lack of funds and insufficient interest from possible participants.

PROBLEM STATEMENT 2.

CENSUSING IS NOT ATTRACTIVE TO DONORS AND IS THE MAIN CAUSE OF THE LACK OF PROGRESS TO DATE ON THE ACTION STEPS OUTLINED AT THE LAST WORKSHOP.

SOLUTION:

- Raise general awareness for the need for census data on wild cheetah populations.
- Encourage census to be a component of all field projects.

ACTION STEP 1:

Produce a leaflet outlining the importance of censusing cheetah populations in the wild.

RESPONSIBLE: Sarah Durant, Vanessa Bower and Kelly Wilson

TIMELINE: December 2002

RESOURCES: 3000 leaflets @ \$0.30 per leaflet = \$900. 10 working days.

COLLABORATORS: Members of working group.

MEASURABLE OUTCOMES: Leaflet produced

OBSTACLES: Lack of funding.

ACTION STEP 2:

Include census issues in public relations material.

RESPONSIBLE: Martin Mulama to place on Kenya Wildlife service (KWS) website and include in KWS newsletter, Sarah Durant on WCS and Zoological Society of London (ZSL) website and include in Tanzania Carnivore Centre newsletter, Kelly Wilson to place on University of Pretoria website, Laurie Marker to place on Cheetah Conservation Fund (CCF) website and include in CCF newsletter, Vanessa Bower to place on De Wildt website.

TIMELINE: Ongoing

RESOURCES: Estimated 10 working days

COLLABORATORS: Members of working groups

MEASURABLE OUTCOMES: Higher prominence of censusing in PR material

OBSTACLES: No apparent obstacles.

PROBLEM STATEMENT 3.

THERE IS A NEED TO TEST AND ASSESS THE ACCURACY OF PRIORITY TECHNIQUES IN DIFFERENT FIELD SITUATIONS.

SOLUTION:

Use priority techniques in identified areas with known cheetah population sizes.

ACTION STEP 1:

Raise resources where necessary.

RESPONSIBLE: Sarah Durant (Serengeti), Gus Mills (Kruger) and other individuals to be identified at the workshop will be responsible for raising resources for target areas.

TIMELINE: To be identified at the workshop.

RESOURCES: To be estimated at workshop.

COLLABORATORS: All delegates to workshop.

MEASURABLE OUTCOMES: Resources will become available.

OBSTACLES: Lack of interest from donors.

ACTION STEP 2:

Conduct censuses in target areas.

RESPONSIBLE: Individuals will be identified at workshop.

TIMELINE: To be identified at the workshop.

RESOURCES: To be estimated at workshop.

COLLABORATORS: All delegates to workshop.

MEASURABLE OUTCOMES: Cheetah population sizes in target areas estimated and confidence limits given for estimates.

OBSTACLES: Insufficient funding.

ACTION STEP 3:

Workshop to disseminate results from trial censuses.

RESPONSIBLE: Sarah Durant and Laurie Marker.

TIMELINE: 2 years from first workshop.

RESOURCES: Estimated at around \$10 000, personnel time for organisation of agenda, travel and accommodation.

COLLABORATORS: Delegates to previous workshop.

MEASURABLE OUTCOMES: Workshop report which will prioritise techniques that are feasible and practical for field situations.

OBSTACLES: Insufficient funding.

PROBLEM STATEMENT 4.

THERE IS A LACK OF COOPERATION AMONG GOVERNMENTS, LANDOWNERS AND MEMBERS OF THE WORKING GROUP.

SOLUTION:

Encourage frequent and regular communication within the working group and between landowners and government.

ACTION STEP 1:

Ensure that communication within the group occurs at least monthly.

RESPONSIBLE: Sarah Durant.

TIMELINE: Ongoing and monthly.

RESOURCES: Time.

COLLABORATORS: All members of the group.

MEASURABLE OUTCOMES: All members of group updated on progress at all times.

OBSTACLES: Phone line connection.

ACTION STEP 2:

Identify working groups or key individuals within range countries to disseminate information to stakeholders.

RESPONSIBLE: Sarah Durant (Tanzania), Martin Mulama (Kenya), Kelly Wilson (South Africa), Bonnie Schumann (Namibia), Rebecca Klein (Botswana), Behzad Rahgoshai (Iran), Nettie Purchase (Zimbabwe), Kelly Wilson to identify individuals in other range states.

TIMELINE: November 2002.

RESOURCES: Time.

COLLABORATORS: All members of the group and identified groups and individuals within country.

MEASURABLE OUTCOMES: Stakeholders kept updated of significant findings of working group.
OBSTACLES: Working groups or key individuals exist within country.

ACTION STEP 3:

Disseminate results of workshops to responsible individuals identified in Action Step 2.

RESPONSIBLE: Sarah Durant and Martin Mulama.

TIMELINE: Within three months of workshop.

RESOURCES: Time, communication and printing costs.

COLLABORATORS: All members of the group.

MEASURABLE OUTCOMES: Stakeholders kept updated on recommendations of workshops.

OBSTACLES: Working groups or key individuals exist within country.

PROBLEM STATEMENT 5.

THERE IS LITTLE INFORMATION ON CHEETAH NUMBERS IN MOST AREAS AND HABITATS WHERE THEY OCCUR

SOLUTION:

Conduct censuses of cheetah in representative habitats within key range states and analyse results.

ACTION STEP 1:

Ensure that there is sufficient capacity and trained personnel within key range states.

RESPONSIBLE: Sarah Durant and Martin Mulama to co-ordinate activities.

Sarah Durant (Tanzania), Martin Mulama (Kenya), Kelly Wilson (South Africa), Bonnie Schumann (Namibia), Rebecca Klein (Botswana), Behzad Rahgoshai (Iran), Nettie Purchase (Zimbabwe), Kelly Wilson to identify individuals in other range states.

TIMELINE: Within 1 year of second workshop.

RESOURCES: Time and field expenses, both of which depend on the chosen technique.

COLLABORATORS: All members of the group.

MEASURABLE OUTCOMES: Sufficient trained personnel exist within all key range states.

OBSTACLES: Funding.

ACTION STEP 2:

Activate censuses of cheetah in as many different habitats as possible.

RESPONSIBLE: Sarah Durant and Martin Mulama to co-ordinate activities.

Sarah Durant (Tanzania), Martin Mulama (Kenya), Kelly Wilson (South Africa), Bonnie Schumann (Namibia), Rebecca Klein (Botswana), Behzad Rahgoshai (Iran), Nettie Purchase (Zimbabwe), Kelly Wilson to identify individuals in other range states.

TIMELINE: Within 2 years of second workshop.

RESOURCES: Time, field expenses which are dependent on technique chosen.

COLLABORATORS: All members of the group.

MEASURABLE OUTCOMES: Estimates of cheetah density obtained for representative habitats.

OBSTACLES: Funding.

ACTION STEP 3:

Hold workshop to disseminate results from censuses undertaken.

RESPONSIBLE: Sarah Durant and Martin Mulama.

TIMELINE: Within 3 years of second workshop.

RESOURCES: Time, funds for workshop.

COLLABORATORS: All members of the group.

MEASURABLE OUTCOMES: Report produced which will give:

- Preliminary estimates of national population size within key range states.
- Identify areas critical for cheetah conservation.

OBSTACLES: Funding

PROBLEM STATEMENT 6.

THERE IS CURRENTLY LITTLE INFORMATION ON THE IMPACT OF CONSERVATION MANAGEMENT ON CHEETAH POPULATIONS.

SOLUTION:

Initiate long-term monitoring of cheetah populations in areas identified under Problem Statement 5, Action step 3.

ACTION STEP 1:

Identify key individuals, organisations or institutions able to implement monitoring plans.

RESPONSIBLE: Country representatives.

TIMELINE: Ongoing from within 4 years of second workshop.

RESOURCES: Time, funds.

COLLABORATORS: All members of the group.

MEASURABLE OUTCOMES: Information on long term population trends available in critical areas.

OBSTACLES: Funding.

PROBLEM STATEMENT 7.

THERE IS LITTLE INFORMATION ON THE DEMOGRAPHIC PARAMETERS AND THE ECOLOGY OF CHEETAH POPULATIONS IN DIFFERENT HABITATS.

SOLUTION:

Identify and collate all existing information and initiate in depth demographic and ecological studies of cheetah in habitats where there is no information available.

ACTION STEP 1:

Collate and summarise existing demographic and ecological information on cheetah into a report.

RESPONSIBLE: Sarah Durant, Martin Mulama and Kelly Wilson.

TIMELINE: End of 2003.

RESOURCES: Time, funds.

COLLABORATORS: All members of the group.

MEASURABLE OUTCOMES: Summary report.

OBSTACLES: Funding and sufficient time.

ACTION STEP 2:

Initiate relevant in-depth field studies in habitats where no information currently exists.

RESPONSIBLE: Country representatives.

TIMELINE: 2004

RESOURCES: Time and funds.

COLLABORATORS: All members of the group.

MEASURABLE OUTCOMES: Annual progress reports produced for each study.

OBSTACLES: Funding and personnel.

Protecting Cheetah Outside Protected Areas Working Group Report

WORKING GROUP PARTICIPANTS:

- **Thys de Wet:** Problem animal control fieldworker background (30+ years).
- **Bonnie Schumann:** Researcher at the Cheetah Conservation Fund (CCF) – 6 years, before with captive breeding centre (6 years).
- **Mark Prangley:** Game capture and problem animal control.
- **Ann van Dyk:** 30 years' experience with captive breeding. Involved in the wild cheetah management programme.
- **Nettie Purchase:** Researcher (4 years).
- **Josephine Henghali:** Conservation Biology student.
- **Rebecca Klein:** Wildlife Biologist – Mokolodi Nature Reserve, Botswana cheetah conservation.
- **Deon Cilliers:** Problem animal control experience (10 years). Chairman of National Cheetah Management Plan (NCMP).

EXECUTIVE SUMMARY:

Many cheetah in Africa live outside protected areas demarcated by National Governments and are, consequently, under threat from persecution by humans who share the same areas with them. In addition, many human livelihood systems are threatened by livestock losses to cheetah.

Cheetah should live in the wild and the participants of this working group believe that it is possible to resolve the conflict that exists between people and cheetah outside of officially protected areas. However, often the local political and sociological environment means that resolving conflict is a complex issue, requiring input from many different disciplines. Cheetah occur throughout Africa and exist with people with varied cultural and economic backgrounds, who practice a variety of land management techniques. It is not possible to find one solution to resolve the conflict between land users and cheetah, as each area will be unique and require a unique solution. However, certain themes and behaviour patterns of both cheetah and humans will be found in all areas where people live with cheetah.

The participants of this working group believe that the first step in the process of resolving conflict is to identify and work with key people in each of the range states of the cheetah, to identify where conflict exists, why there is conflict and what possible solutions there are to resolve this conflict. A number of range states have already set up forums that have representatives of all people involved with cheetah and these forums are working to provide solutions for their particular country. The participants felt that these existing forums should encourage and facilitate similar forums to be set up in other range states. They also felt that it was important to encourage regional co-operation among forums as cheetah populations will occur across political boundaries.

It was accepted by the Working Group that not all land management practices are compatible with cheetah and that a need exists to move cheetah from areas where they are threatened to "safe" areas, such as private land where cheetah are tolerated, protected areas or captive populations. However, this must be carried out in a way that maximizes the chances of survival of the species as a whole and along the lines of meta-population management. To achieve this there needs to be national, regional and international co-operation of the people involved. There is also a need to understand why some land management practices are not compatible with cheetah, and to work to change this.

If cheetah are to be effectively managed at a national, regional and global level there is a need for efforts to be coordinated to prevent duplication and resource wastage. It was acknowledged that there is a lack of understanding in many range states about cheetah biology, the role that cheetah and other predators play in the ecosystem and the land management practices that favour co-existence. Co-operation among range state forums and organizations would assist in educating people living with cheetah and the possibility of expanding the area suitable for cheetah through active marketing of the cheetah as a flagship species. The cheetah has an economic, ecological and intrinsic value at all spatial scales. If these values can be made apparent to people living with cheetah, national governments and global institutions then progress will be made in resolving the conflict that exists on the ground. Greater understanding of the factors affecting cheetah survival would assist in streamlining policies that affect cheetah, as at present these are often fragmented, inappropriate and un-enforced within and between range states, and on a global scale.

To achieve all these objectives, it is imperative that the necessary resources (financial and logistical) be made available in many range states, especially in those where no efforts are currently being made to conserve cheetah, due to limited resources.

SITUATION OVERVIEW:

Definition of unprotected cheetah area: “Areas where people live with cheetah.”

Any area where the landowner (private or government) requires an incentive to have cheetah.

ULTIMATE AIM OF THIS WORKING GROUP:

Cheetah should live in the wild, and in certain areas there is potential for conflict resolution to result in co-existence between humans and cheetah but politics and changes in land use make this a complex issue. Some of these factors are outside our control and we need to develop pro-active plans independent of political changes.

***Note:** All issues discussed need to consider the fact that there are very different cultural and other economic groups (e.g. professional hunters) practicing various forms of land management, therefore each requires a specific approach to conflict resolution. Recommended solutions and actions need to be adapted by regional committees to suit the local requirements.*

Groups include:

- Traditional hunter/gatherers on state-owned land.
- Traditional pastoralists on land that is state-owned but grazed communally.
- Commercial and subsistence farmers – private landowners running commercial and subsistence ventures.
- Communal farmers on land that is state-owned but farmed on a communal basis.
- Professional hunters.

In East Africa, the lifestyle of some of the cultural groups (traditional pastoralists) promotes cheetah conservation. These cultural groups have lived alongside wild animals for millennia, and utilise livestock management techniques that minimise losses. Hence they are relatively tolerant of the wildlife living on their land. This lifestyle/culture is being lost. Where governments still own land, traditional pastoralist activities should be supported through lobbying to for pastoralist land rights to enable them to retain control over landuse.

PROBLEM STATEMENT 1.

CONFLICT OFTEN EXISTS BETWEEN PEOPLE AND CHEETAH OCCUPYING THE SAME AREA.

OVERALL SOLUTION:

Recognising that human needs play a key role, conflict resolution needs to be applied to communities where people and cheetah occupy the same area. Resolution of conflicts should be divided into short- and long-term solutions.

SOLUTION 1:

Identify key representatives of stakeholders in the range states from which sub-regional and regional cheetah forums can be set up to address the issues of conflict within and between countries and work towards resolving conflict. These forums will be used to identify key people within those countries to act as spokespersons and role models.

This has a minimum and maximum solution.

2002 UPDATE: Have been implemented in some areas and ongoing in others.

ACTION STEP 1:

Minimum solution:

Facilitate establishment regional forums in countries where they do not exist, to address conflict. Use existing forums within range states to help form new groups within other countries that will then be incorporated into regional forums.

RESOURCES REQUIRED: E-mail and visits to other countries to facilitate first meetings.

RESPONSIBLE: Forums already been formed in South Africa, Namibia and Zimbabwe which can lead this process:

South Africa, Zimbabwe, Namibia, Kenya and Iran have official recognised forums. Under development are Tanzania and Uganda (Sarah Durant and Martin Mulama) and Botswana (Rebecca Klein). However, there are still range states that need these forums. Zimbabwe (Nettie Purchase). Mozambique (Thys de Wet) and Angola (collaboration between Nettie and Josephine). North Africa (Ronel Smuts).

TIMELINE: June 2003.

OBSTACLES: Lack of knowledge of range states.

Communication in some range states is limited (eg e-mail is not available).

COLLABORATORS: Work with database set up by *in situ* / *ex situ* working group.

MEASURABLE OUTCOMES: Identification of people in range states who can represent stakeholders. We cannot create the forums, we can only suggest and facilitate their creation.

Note: *It is recognised that such forums depend on communication and infrastructure which are only available in relatively developed African countries. Tanzania is a long way off being able to develop functioning forums which could cover a reasonable area, and this is possibly true of many other range states.*

ACTION STEP 2:

Maximum solution:

To establish forums in every range state. Present this is beyond the capabilities of the group but is an ongoing goal.

OBSTACLES: Lack of knowledge of range states.

Communication in some range states is limited (eg e-mail is not available)

COLLABORATORS: Work with database set up by *in situ / ex situ* working group

MEASURABLE OUTCOMES: Identification of people in range states who can represent stakeholders. We cannot create these forums, we can only suggest and facilitate their creation.

ACTION STEP 3:

Encourage the establishment of sub-regional forums to keep country forums active and encourage communication across borders.

REGIONS:

- North + North Africa
- East Africa including Mozambique, Uganda and Zambia
- Southern Africa including Angola, Mozambique, Zambia

RESOURCES REQUIRED: E-mail
Funds for regional meetings

RESPONSIBLE/ TIMELINE:

- Ronel Smuts: June 2004
- Sarah Durant and Martin Mulama: June 2004
- Deon Cilliers and Rebecca Klein: December 2002

OBSTACLES: Lack of established forums
Lack of co-operation

SOLUTION 2:

Where no immediate co-existence is possible cheetah should be removed and relocated into parks or reserves and captive situations where they will have to be managed as meta-populations and become part of a global management plan (captive/meta-population).

***NB.** This solution incorporates *in situ /ex situ* cooperation suggestion that there be a regional programme to manage small isolated wild cheetah populations.*

2002 UPDATE: Relocations ongoing in South Africa, Zimbabwe, Namibia and Botswana are to start in the immediate future. Meta-population management still needs development.

ACTION STEP 1:

Create a database of existing areas into which cheetah have been relocated. This should include information like numbers, sex ratios, origin of founder populations and information on the area like its size, habitat type, prey base, carrying capacity and potential for further relocation.

RESPONSIBLE: Each forum will have the role of identifying areas. Database will be created and kept up to date by Kelly Wilson.

TIMELINE: 6 months to identify areas.
Another 6 months to create database.

ACTION STEP 2:

Identify and prioritise new areas that are considered to be suitable by the in country forum.

RESPONSIBLE: South Africa (Deon Cilliers)
Mozambique (Thys de Wet)
Zimbabwe and Zambia and Angola (Nettie Purchase)
Botswana (Rebecca Klein)
Namibia and Angola (Josephine Hengali)
Kenya and Uganda (Martin Mulama)

Tanzania and Uganda (Sarah Durant)
North Africa (Ronel Smuts)

ACTION STEP 3:

Dependant upon Action Step 1 + 2

Set up regional metapopulation meetings.

RESPONSIBLE: Chairman of working group

TIMELINE: Dependant on action steps 1 + 2

SOLUTION 3:

Ongoing research to understand more about the role of a cheetah in the ecosystem outside protected areas.

This is an ongoing process.

ACTION STEP:

Identify priority areas for research and coordinate with *Ex Situ / In Situ* Working Group database for allocation of funding and reference to interested researchers.

RESPONSIBLE: All members of group specific to country.

TIMELINE: December 2002 and ongoing.

SOLUTION 4:

Analysis into the suitability of the various economic methods to encourage coexistence with cheetah. This may include compensation, insurance policies, etc.

ACTION STEP: Share information about current and potential methods to increase tolerance to cheetah.

RESPONSIBLE: All members of workgroup.

TIMELINE: Initially December 2002, then biannually updates on CIG website.

PROBLEM STATEMENT 2.

RESEARCH AND CONSERVATION EFFORTS ARE UNCOORDINATED AMONG GROUPS, REGIONS AND COUNTRIES. THIS RESULTS IN DUPLICATION OF EFFORTS.

SOLUTION:

Establish a central advisory body where new cheetah conservation and research projects can be compared to existing projects. The body will suggest alterations and coordinate these activities and encourage communication between forums and projects.

ACTION STEP 1: Request that the CIG take on this function.

RESPONSIBLE: All members of the group.

TIMELINE: Immediate.

ACTION STEP 2:

Each forum will send either a copy of minutes of meeting/media releases/newsletters to other forums that are known to be in place and in active.

RESPONSIBLE: For mailing list: Bonnie Schumann.

For sending information: all representatives of forums already in place

TIMELINE: Ongoing.

PROBLEM STATEMENT 3.

THERE IS A NEED TO EDUCATE STAKEHOLDERS ABOUT CHEETAH BIOLOGY, THE ROLE THAT CHEETAH PLAY IN THE ECOSYSTEM AND WAYS TO LIVE WITH CHEETAH. BUILDING ON THAT WILL BE THE NEED TO ACCEPT CHEETAH THROUGH MARKETING INITIATIVES WITH A VIEW TO EXPANDING THE RANGE OVER WHICH CHEETAH AND HUMANS CAN COEXIST.

SOLUTION 1:

Improve the information available to educate people living with cheetah about the basic ecology of cheetah, the importance of cheetah as a species in an ecosystem, livestock management, game management, the value of conservancies and identification of predators responsible for killing a stock animal (livestock or game).

2002 UPDATE: ongoing.

ACTION STEP: 1

Investigate what education materials are available (brochures, pamphlets etc.) and what further developments of these materials are necessary. Each representative of the country will collect information and pass it on to the responsible collator.

1a: Basic ecology and importance of cheetah

RESPONSIBLE: Josephine Henghali and Ronél Smuts

TIMELINE: December 2002 and ongoing

1b: Livestock management

RESPONSIBLE: Deon Cilliers

TIMELINE: December 2002 and ongoing

1c: Game management

RESPONSIBLE: Nettie Purchase

TIMELINE: December 2002 and ongoing

1d: Conservancies

RESPONSIBLE: Rebecca Klein

TIMELINE: December 2002 and ongoing

1e: Predator identification

RESPONSIBLE: Thys de Wet

TIMELINE: December 2002 and ongoing

1f: Solutions to cheetah problems.

RESPONSIBLE: Bonnie Schumann

TIMELINE: December 2002 and ongoing

SOLUTION 2:

Education material needs to be passed onto to the people actively living with cheetah. This will require individuals involved in nature conservation (extension workers, agricultural people, biology students, farmers / farmers wives, sociologists and community based NGOs) to be made aware of the issues and shown how to explain them to people living on the land. Each type of person / group needs suited to the task of getting the information across to the various groups of people living with cheetah.

2002 UPDATE: Ongoing in some range countries but needs to be initiated in others such as Zimbabwe, Zambia, Botswana and North Africa.

ACTION STEP 1:

When information has been collated, the person responsible will liase with the Education and Communication Working Group to decide how best to utilise, improve and disseminate this information.

SOLUTION 3:

Develop a marketing strategy that emphasises the:

1. Value of cheetah (for farmers): economic, intrinsic, ecological.
2. Basic economic benefit of sound land management (includes game/livestock).
3. Benefits of conservancies.
4. Change perception of real economic impact of cheetah on farming – relay success stories.
5. Benefits of tourism.
6. Concept that cheetah contribute to a healthy ungulate population.
7. Value of trophy hunting in true wilderness area.
8. Value of marketing ethical hunting.
9. Marketing of cheetah as a flagship species in conservation. Market steps to become a cheetah conservation farmer.
10. Increased value of cheetah through marketing.

2002 UPDATE: Did not happen. Feeling is it is not practical due to workload involved. A specific person needs to be appointed and possibly paid to do this job. Still want this as a solution.

ACTION STEP 1:

Identify an advertising company to adopt the concept of telling the public the status and threats to the cheetah.

RESPONSIBLE: Ronel Smuts.

TIMELINE: December 2002.

PROBLEM STATEMENT 4.

CHEETAH ARE COMPATIBLE WITH SOME LAND USES BUT NOT WITH OTHERS.

SOLUTION 1:

Identify land management practices that are compatible with cheetah and those that are not, and try to obtain maximum area of the former as well as adapt the current incompatible land use practices where possible to make them more compatible.

Minimum: To do this within represented range states.

2002 UPDATE: Ongoing

ACTION STEP 1:

A basic document on sound land management is available from Birgit Forster that can be sent to authorities/cheetah forums in all range states. This will then give these states a baseline from which to start working.

RESPONSIBLE: Birgit Forster / Thys de Wet.

TIMELINE: December 2002.

ACTION STEP 2:

Make available the information from the NCMP (SA) "Cheetah friendly farmer" campaign to all participants with the idea of them using it in their countries to promote management techniques that reduce conflict.

RESPONSIBLE: Deon Cilliers

TIMELINE: Immediate

PROBLEM STATEMENT 5.

THE CHEETAH HAS AN ECONOMIC, ECOLOGICAL AND INTRINSIC VALUE, AND WE NEED TO WORK TOWARDS HAVING THE PERCEIVED AND ACTUAL COSTS OUTWEIGHED BY THESE VALUES. THE VALUE AND COST OF CHEETAH IS AN INDIVIDUAL, COMMUNITY AND INTERNATIONAL RESPONSIBILITY AND ASSET. WE NEED TO RECOGNISE DIFFERENT CULTURAL UNDERSTANDINGS OF COST AND VALUE.

SOLUTION:

To determine if the value of a cheetah to a person outweighs the cost, a cost benefit analyses should be carried out under the following scenarios:

- Commercial farming with the option of trophy hunting and photo/ecotourism.
- Commercial farming without the option to harvest the cheetah.
- Communal sedentary farming.
- Traditional nomadic pastoralism.

And in different range countries.

ACTION STEP:

Where possible current models of cost/benefit analysis will be investigated and compiled through possible outsourcing or within forums in Botswana, Namibia, South Africa and Zimbabwe and made available to other forums in other countries.

RESPONSIBLE: All people present.

TIME LINE: Ongoing but report back by July 2003

PROBLEM STATEMENT 6.

GLOBAL, NATIONAL AND REGIONAL POLICY AND LEGISLATION REGARDING LAND USE AND CONSERVATION IS FRAGMENTED, INAPPROPRIATE AND UN-ENFORCED. THERE IS LITTLE REGIONAL AND COUNTRY-TO-COUNTRY AGREEMENT.

SOLUTION 1:

Examine international and regional policy legislation and make recommendations to the various responsible bodies to ensure that this legislation is compatible between range states as well as internationally.

2002 – No solution formulated last year. This is new.

ACTION STEP 1:

Draft a working template for the comparison of various policies and legislations currently used in range states.

RESPONSIBILITY: Deon Cilliers.

TIMELINE: March 2003

ACTION STEP 2:

Collect and summarise various policies, legislation pertaining to cheetah in the various countries.

RESPONSIBILITY: Namibia: Bonnie Schumann
Botswana: Rebecca Klein
Zimbabwe: Nettie Purchase
South Africa: Deon Cilliers
Kenya: Martin Mulama
Tanzania: Sarah Durant
Iran: Behzad Rahgoshai
UAE and neighbouring countries: Ronél Smuts.

ACTION STEP 3:

Collate all of above and make available on CIG website.

RESPONSIBILITY: Steve Hines.

TIMELINE: December 2003.

ACTION STEP 4:

Make recommendations regarding shortcoming of regional and national policies and legislation to relevant governmental Authorities:

RESPONSIBILITY: Regional forums via CIG steering committee.

TIMELINE: December 2003.

PROBLEM STATEMENT 7.

FUNDING IS CRITICAL IF WE ARE TO ACHIEVE SUCCESS IN PROTECTING CHEETAH OUTSIDE PROTECTED AREAS.

SOLUTION:

Identify and coordinate funding requirements. Utilise the CIG network.

ACTION:

Utilise CIG network.

RESPONSIBILITY: Country and regional forums.

TIMELINE: Ongoing.

Coordinating *In Situ* and *Ex Situ* Conservation Efforts

Working Group Report

WORKING GROUP PARTICIPANTS:

Pamela Bristow: Department of Environmental Affairs and Tourism South Africa, assists with the development and implementation of species conservation policies, strategies for South Africa.

Riaan Maritz: Private collector in South Africa and collector of information pertaining to cheetah since 1998.

John Dinon: Director of Animal Conservation Programmes at the Cincinnati Zoo where cheetah is a conservation priority through education, captive breeding, research and support of *in situ* programmes (especially CCF), member of North America Cheetah Species Survival Plan (SSP) management group.

Alan Strachan: Curator at the De Wildt Cheetah and Wildlife Trust, captive breeding of cheetah.

Duncan Purchase: self employed, computer programmer currently working on project to develop database for collecting data on cheetah conflict on farms in Zimbabwe.

Dave Wildt: Senior Scientist from the Smithsonian National Zoological Park and Conservation Research Centre (USA).

Jack Grisham: Director of Animal Management from the Oklahoma City Zoo with a commitment to *in situ* / *ex situ* cheetah conservation, and species coordinator for the North America Cheetah SSP.

Dusty Lombardi: Living Collection Director at the Columbus Zoo where we have committed to cheetah *in situ* / *ex situ* conservation, vice chair North America Cheetah SSP, collecting data of all hand raised cheetah for a global database and working in the "Linking *in situ* / *ex situ* Conservation" subgroup of the SSP.

EXECUTIVE SUMMARY:

This working group was formed because there are advantages to linking field conservation activities to zoo management programmes, one of the most significant being formulating ways to channel funds into conservation activities. Zoos are being recognised as venues, not only for education, but for information dissemination and provoking interest and support of high priority field research. Thus, one of the highest priorities recognized by this working group is the need for actually connecting field researchers and zoo-based managers and researchers, one of the purposes of the Global Cheetah Forum (GCF).

Since the inaugural meeting in 2001, GCF participants have: 1) produced a rough, first-cut database of cheetah related projects (*in situ* and *ex situ*); 2) assisted in fundraising through the North American Cheetah Species Survival Plan (SSP) to partially support the new GCF website (www.cheetahinterestgroup.com) as well as five *in situ* projects (in Namibia, Zimbabwe, Kenya, South Africa); and 3) attempted to secure information from regional coordinators on the status of current *ex situ* populations.

This year, the Linkage Working Group reviewed the 2001 general recommendations and refined many objectives into more specific, action-based guidelines. During this workshop, working group members:

- Designed and developed an electronic database for recording and disseminating information via the website on extant cheetah related research projects.
- Identified the need and mechanism to convene a 'Global *Ex Situ* Managers' Workshop' in 2003 for the purpose of promoting and then executing a reasonable cooperative breeding plan for cheetah maintained *ex situ*.
- Recognised the need and committed to a plan to work with the IUCN's Cat Specialist Group to identify field researchers/projects in Northern and Western Africa.

Individuals and timelines were assigned to each recommendation.

SITUATION OVERVIEW:

This Working Group strongly believes that without establishing close personal bonds on a person-to-person basis, the linking of *in situ* and *ex situ* efforts CANNOT progress. Thus, the group strongly encourages additional face-to-face meetings of all cheetah conservation stakeholders.

Linking *in situ* and *ex situ* conservation is a delicate but necessary component of saving the wild and captive cheetah. As a result of the CBSG Global Cheetah Conservation Action Plan workshop held in 2001 the following Action steps were accomplished by the Coordinating Cheetah Conservation Efforts *In Situ* and *Ex Situ* Working Group;

- Solicited and compiled *ex situ* projects from the North American researchers.
- Created and funded the CIG website www.cheetahinterestgroup.com
- Sent emails out to global regional coordinators requesting data, one response was received to date.
- Compiled a list of 12 *in situ* projects identified at the 2001 meeting, which were distributed to *ex situ* conservation regional coordinators.
- An EEP representative prioritised and returned the list mention above.
- The North American cheetah SSP prioritised these proposals; to date five *in situ* projects were funded or partially funded in Namibia, Zimbabwe, Kenya and South Africa.

PROBLEM STATEMENT 1.

THERE IS A DISCONNECT BETWEEN AND AMONG THE *IN SITU* AND *EX SITU* COMMUNITIES. THERE IS A LACK OF COORDINATION OF *IN SITU* / *EX SITU* EFFORTS TO CONSERVE CHEETAH BETWEEN AND AMONG FIELD RESEARCHERS AND TO INCREASE COOPERATION AND NETWORKING AMONG *IN SITU* CHEETAH BREEDING ORGANISATIONS AND INTERESTED PARTIES.

SOLUTION 1:

Develop and disseminate a cheetah conservation database including *in situ* and *ex situ* projects, people, status of the cheetah, annual reports and reference materials.

Minimum goal: Collect information in an Excel spreadsheet.
Maximum goal: Develop a comprehensive database.

ACTION STEP 1:

Design two different database formats, one for *ex situ*, one for *in situ*, then a combination of the two databases. Use modified Appendix 6 in GCAP Report

Add contact info,(email, address, phone, fax) in same Principal Investigator cell. Change unmet funding to "Funding needed". Change timeline to "Start date" and "Duration".

RESPONSIBLE: Duncan Purchase is responsible for the Excel spreadsheet

TIMELINE: End of December 2002.

ACTION STEP 2:

Duncan will send the database to Jack Grisham who will give feedback and then send to Sean Mckeowen (EEP), Laurie Marker (Africa), Unidentified (contact Suzy Barlow-c/o Western Plains Zoo; sbarlow@zoo.nsw.gov.au; for name) Australia contact to be identified by Alan Strachan, Coordinator in Japan to be identified by Jack Grisham, and contact in Iran will be Behzad Rangoshai. A letter will accompany the spreadsheet stating the following: projects will include research: current and proposed, awareness, education, training, bibliography: including specialist not necessarily doing projects, and reference materials.

RESPONSIBLE: Jack Grisham and Duncan Purchase.

TIMELINE: End of December 2002.

ACTION STEP 3:

All information from regional coordinators is returned to Jack Grisham for combination and forwarding to Steve Hines for inclusion on the website and to notify the secretariat (CBSG South Africa).

RESPONSIBLE: Jack Grisham.

TIMELINE: End of February 2003.

ACTION STEP 4:

Update database as information changes and at least every 2 years.

RESPONSIBLE: Riaan Maritz.

TIMELINE: Ongoing.

SOLUTION 2:

Provide detailed information necessary to raise public awareness and to assist fundraisers to support highest priority cheetah projects.

Minimum goal: Get information from Education Working Group and post on website

Maximum goal: Fund all projects.

ACTION STEP 1:

Institutions and regional coordinators cooperating in cheetah management programmes should promote the document to their fundraising personnel.

RESPONSIBLE: Jack Grisham and regional coordinators.

TIMELINE: 15 April 2003.

SOLUTION 3:

Disseminate contemporary information to relevant policy and decision makers.

Minimum goal: Get report to all designated point persons.

Maximum goal: Distribute report to all relevant policy and decision makers.

ACTION STEP 1:

Distribute the final document produced by CBSG South Africa from this workshop to Government and CITES representatives in each relevant country.

RESPONSIBLE: South Africa (Pamela Bristow), Namibia (Laurie Marker), Zimbabwe (Nettie Purchase), Botswana (Rebecca Klien), Iran (Anoshirvan Najafi), Kenya (Martin Mulama), Tanzania (Sarah Durant), UAE (Ronél Smuts), USA (Dusty Lombardi), Unidentified individual from North Africa.

TIMELINE: By July 2003.

SOLUTION 4:

The knowledge base regarding free-roaming cheetah is lacking and more information may lead to identifying other issues. The knowledge base must be expanded to more effectively conserve cheetah outside of protected areas. There are many sources of available information and it is necessary to access as much of this knowledge as possible (scientific, anecdotal, tribal and agricultural).

Minimum goal: Secure information from those at 2002 Cheetah workshop.

Maximum goal: Secure information from all range states and compile into the database.

ACTION STEP 1:

Set up an information database and allow access to other researchers. The database will also enable analysis of patterns and the impact of cheetah on people in different areas and *vice versa*.

RESPONSIBLE: Nettie and Duncan Purchase.

TIMELINE: End of 2004.

ACTION STEP 2:

Investigate problem, solutions, make recommendations, investigate solutions and monitor effectiveness.

RESPONSIBLE: Various regional committees. In South Africa this will be done by the National Cheetah Management Programme through Thys de Wet and Deon Cilliers.

TIMELINE: End of 2003.

PROBLEM STATEMENT 2.

THERE IS A LACK OF COOPERATION AND COORDINATED MOVEMENT OF CHEETAH AND OR BIOMATERIALS TO FACILITATE GENETIC MANAGEMENT OF THE GLOBAL *EX SITU* POPULATION AS WELL AS INFORMATION ON GENETICS, HUSBANDRY, HEALTH REPRODUCTION, NUTRITION, BEHAVIOUR AND EDUCATION.

SOLUTION 1:

Develop a global programme (genetic and demographic) for managing *ex situ* cheetah.

Minimum goal: Develop global management strategy.

Maximum goal: Implement global management strategy in all *ex situ* populations.

1. It is recognised that many cheetah in captivity are privately owned, and that these private facilities and/or individuals may have either no ability or interest in participating in regional or global captive cheetah management plans.
2. Animals in these facilities need to be identified and excluded from population analysis, and when necessary recorded as “Lost to Follow-up.”
3. Those facilities that choose to participate need to commit to timely communication of changes to their collection (births, deaths, illness).
4. It should be recognised that the primary benefit of globalisation of captive management is information sharing. Movement of animals among regions when considered necessary for demographic or genetic reasons should be done in coordination with global population analyses.
5. The International Cheetah Studbook should be analysed at least every 3 years, not to make animal-by-animal recommendations but to rather track the status of the population. As-needed basis analyses can be done to help regional coordinators locate suitable animals for import / export.

Regional studbooks should be analysed at least annually and used to help guide decisions on breeding and animal moves. Regions may have different levels of expected participation in the captive breeding programmes, and that needs to be respected. Regional programme coordinators need to let the International Studbook Keeper know when they believe they have a need to import or export animals for genetic or demographic reasons

ACTION STEP 1:

Distribute new and improved International Cheetah Studbook.

RESPONSIBLE: Laurie Marker.

TIMELINE: End of February 2003.

ACTION STEP 2:

Formalise captive management programmes within regions. If regions do not already have a formalised captive management programme (Asia?), it needs to be determined if it is possible for those regions to participate in the future.

RESPONSIBLE: Jack Grisham working with regional coordinators.

TIMELINE: July 2003.

ACTION STEP 3:

Each region should identify a Regional Studbook Keeper so that data collection can be more proactive and done on a more timely basis. Regional studbook keepers should send data to the International Studbook Keeper on a regular basis.

RESPONSIBLE: Jack Grisham working with regional coordinators.

TIMELINE: July 2003.

ACTION STEP 4:

If a region currently lacks the expertise in studbook keeping and/or population management, options include obtaining copies of training manuals, attending courses offered in other regions, and/or hosting training workshop(s) within the region.

RESPONSIBLE: Jack Grisham working with Regional Coordinators.

TIMELINE: July 2003.

SOLUTION 2:

Continue to utilise assisted breeding (such as artificial insemination) with cryopreserved gametes from wild cheetah as a means for contributing to the genetic management for *ex situ* populations.

Minimum goal: Continue with current research and use of Artificial Insemination (AI) etc.

Maximum goal: Disseminate this technology to all regions.

ACTION STEP 1:

Continue improving semen cryopreservation and artificial insemination methods to maximise reproductive success after assisted breeding.

RESPONSIBLE: JoGayle Howard, Budhan Pukazhenth, Adrienne Crosier (Conservation & Research Centre, National Zoological Park, USA) and Paul Bartels (wBRC – South Africa).

TIMELINE: Continued research in 2002 and beyond.

PROBLEM STATEMENT 3.

THERE IS A SPECIAL AREA OF CONCERN ABOUT THE LACK OF INFORMATION FOR THE CHEETAH OF NORTHERN AND WESTERN AFRICA.

SOLUTION 1:

Develop a list of contacts from experts in the region that might have useful information to begin or enhance conservation initiatives.

Minimum goal: Make list of contacts in North and West African range states.

Maximum goal: Secure information from these contacts and include it in the database.

ACTION STEP:

Identify and contact experts in those regions. Send database and request their information for the database

RESPONSIBLE PERSON: John Dinon.

TIMELINE: End of 2003.

SOLUTION 2:

Assist these contact people by inviting them to the next cheetah workshop and/or helping to organise a conservation management planning workshop in the northern and/or western Africa region(s).

Minimum goal: Invite contacts.

Maximum goal: Total participation at meeting.

ACTION STEP:

Invite the identified contact individuals from the above solution.

RESPONSIBLE PERSON: Yolana Friedmann and Jack Grisham.

TIMELINE: By next cheetah workshop.

Education Working Group Report

WORKING GROUP PARTICIPANTS:

Annie Beckhelling, Cheetah Outreach, South Africa

Goal to disseminate information to public via ecotourism; *in situ* conservation support (CCF) through fundraising; for 7 years have been running education outreach programme at no cost to underprivileged schools.

Vanessa Bouwer, De Wildt Cheetah and Wildlife Centre, South Africa

Non-profit organisation involved in captive breeding, education and protection of free-roaming cheetah.

Verity Bowman, Marwell Zimbabwe Trust, Zimbabwe

Non-profit organization running cheetah projects in Zimbabwe.

Jennifer Buff, Smithsonian National Zoo's Conservation & Research Centre, USA

To develop and implement programs for teachers – professional training that connects to scientists and conservationists.

Steve Hines, Marketing Resource Management, USA

Interested in cheetah from the business perspective (specifically ecotourism).

Naida Loskutoff, Centre for Conservation & Research, Henry Doorly Zoo, USA

Involved in various aspects of assisted reproductive programs in felids.

Jan Louwman, Wassennar Wildlife Breeding Centre, Holland

Effective captive breeding of cheetah and other endangered species.

Kelley Snodgrass, Fossil Rim Wildlife Centre, USA

Long-standing interest in cheetah; desires to expand cheetah conservation efforts from *ex situ* to *in situ* including global issues.

Diana Twining, Africa Conservation Science Centre, USA

Interested in cheetah from the private sector.

EXECUTIVE SUMMARY:

This working group grappled with issues that inhibit communication and the development of effective education programmes relating to the cheetah. These issues include the lack of resources in Africa, the lack of co-operation among stakeholders, defects in educational systems, inappropriate political appointments, the diversity of cultures and the limited opportunities for involvement in fauna and flora for most of Africa's peoples.

After a great deal of dialogue and significant review of the issues, this group determined that there was one core issue and that, if addressed would lead to progress on matters pertaining to education and communication.

It was acknowledged that the initiatives begun by this group had been very successful and that the initial lack of cooperation between stakeholders had been replaced by a willingness to cooperate and that the issue now was the implementation of a strategy and the expansion of the network. A fear was expressed that as this took place pilot projects would be neglected.

A practical starting point was therefore:

To identify individuals who are able to initiate a visioning process/workshop/programme in countries where cheetah occur. These individuals will consist of a facilitator, skills/resource personnel and the anchor organisation(s). The anchor organisation is to identify the correct target audience(s) for e.g., school-based educators, urban or rural farmers, tourism bodies etc.

It was agreed that, as a start, the De Wildt Cheetah Centre would initiate a visioning workshop and involve representatives from Botswana and Zimbabwe.

On the issue of communication this group recommended that an internal communication structure be developed and that it should include the development of a dynamic website.

SITUATION OVERVIEW:

Actions following the CIG Workshop in 2001 resulted in several major accomplishments for the Education and Communications Working Group as follows:

1. An initial educational resources survey conducted by Annie Beckhelling was conducted and nine countries participated. Results are included as Appendix VI in this workshop report.
2. A vision process targeting school-based education was conducted and subsequent programmes were initiated in the Western Cape Province, RSA.
3. Vanessa Bouwer and Annie Beckhelling initiated a dialogue to expand similar school-based education programmes within South Africa.
4. Two additional teachers from the Western Cape Department of Education trained in conservation science at the Smithsonian National Zoo's Conservation Research Centre.
5. Namibia (Cheetah Conservation Fund) initiated a vision process targeting school-based education programmes..
6. De Wildt Cheetah and Wildlife Centre and the Marwell Zimbabwe Trust have implemented education programmes for farmers in the Limpopo Province of RSA and Zimbabwe.
7. During the 2002 CIG Workshop, dialogue on the vision process for education expanded to include Zimbabwe and Botswana.
8. A survey was conducted by Steve Hines to determine the needs for a website – this was completed in 2002 and the results were distributed to all CIG members.
9. A CIG website address and template was established by Steve Hines.

During the Cheetah Action Plan (CAP) Workshop in 2002, the Education and Communications Working Group reviewed these successes along with the issues and recommendations from the previous year. Key to subsequent discussions and revisions was the recognition that the will to cooperate and communicate was very apparent.

First, successes in educational initiatives emanating from the 2001 GCAP Workshop guided the consolidation and revision of issues, solutions and action steps reflecting the need to expand beyond the pilot areas. This was to occur not through implementation of these successful programmes, but through the initiation of a process to identify promising projects that address the region-specific needs of range countries.

Secondly, it was determined that the issues relating to internal GCF communication and cooperation be refined and expanded to reflect advances made in these areas subsequent to the 2001 CAP Workshop.

PROBLEM STATEMENT 1.

EDUCATION

The initiative begun by this group following the 2001 GCAP Workshop **has been very successful**. A will to communicate and cooperate has replaced the initial lack of communication and cooperation among GCF members. The issue has been revised as follows:

GCF STAKEHOLDERS NEED TO DEVELOP AND IMPLEMENT EDUCATIONAL PROJECTS IN RANGE COUNTRIES. ADDITIONALLY, THERE IS A FEAR THAT AS THE NETWORK EXPANDS, PILOT PROJECTS MAY BE NEGLECTED.

SOLUTION:

Start the visioning process for education in other regions or range countries.

ACTION STEP 1:

Identify key individuals who are able to initiate a visioning process for education programmes targeting specific issues/audiences in countries where cheetah occur. These key individuals will comprise skills/resource personnel, the anchor organisation(s) and a facilitator.

RESPONSIBLE: Using the informal dialogue initiated in July 2002: Annie Beckhelling, Jennifer Buff, Verity Bowman, Vanessa Bouwer, Kelley Snogross and Rebecca Klein (Botswana) will identify or propose key individuals and potential sources for start-up costs.

TIMELINE: Beginning July 2002, decisions by January 2003 with anticipated vision process(es) scheduled prior to January 2004.

MEASURABLE OUTCOME: Within six months, De Wildt will schedule an initial vision workshop (organized by Vanessa Bouwer). As observers Verity Bouwer and Rebecca Klein (and potentially others) at this initial vision workshop, will advance discussions on whether the initial vision process can be applicable and can be initiated in Zimbabwe and Botswana, respectively. The goal is that at least the Limpopo Province in South Africa, and hopefully also Zimbabwe and Botswana will have a vision process scheduled and/or initiated by January 2004.

ACTION STEP 2:

The anchor organisation should indicate the appropriate target audience(s), relevant theme(s) with a consideration of local issues and perspectives.

RESPONSIBLE: Using the informal dialogue initiated in July 2002: Annie Beckhelling, Jennifer Buff, Verity Bowman, Vanessa Bouwer, Kelley Snogross and Rebecca Klein (Botswana).

TIMELINE: As per timeline for Action Step 1.

MEASURABLE OUTCOME: As per measurable outcomes for Action Step 1.

ACTION STEP 3:

In the visioning process, sustainability and strategy for resulting projects should be discussed. This includes identifying both long and short-term funding, tapping additional resources and service providers, and articulating measurable outcomes (assessment and evaluation).

RESPONSIBLE: Using the informal dialogue initiated in July 2002: Annie Beckhelling, Jennifer Buff, Verity Bowman, Vanessa Bouwer, Kelley Snograss and Rebecca Klein (Botswana).

TIMELINE: As per timeline for Action Step 1.

MEASURABLE OUTCOME: As per measurable outcomes for Action Step 1.

OBSTACLES: The question of whether the visionary process conducted initially in South Africa will be viable and appropriate for Zimbabwe and Botswana. If it is determined that the process and/or implementation may not be appropriate for those countries, then discussions will commence to determine alternative strategies.

IMPACT: Three innovative, regionally-based educational initiatives will be executed by January 2004. An important by-product will be that the other GCF members will be inspired and motivated to attempt visioning processes in other regions that can expand our ability to educate and communicate GCF objectives in other range countries, especially those not represented in the first two cheetah workshops (e.g., North African range countries).

PROBLEM STATEMENT 2.

THE GLOBAL CHEETAH FORUM NEEDS AN INTERNAL COMMUNICATION STRUCTURE.

SOLUTION 1:

Develop a Global Cheetah Forum website.

ACTION STEP 1:

A CIG-wide survey was completed following the 2001 GCAP Workshop. The summary of this survey is included as Appendix VI this workshop report.

RESPONSIBLE: Steve Hines.

TIMELINE: Completed early in 2003.

MEASURABLE OUTCOME: Of the 42 people canvassed, 18 responded (42.8% return).

ACTION STEP 2:

Establish the website address and template.

RESPONSIBLE: Steve Hines.

TIMELINE: Completed in early 2003.

MEASURABLE OUTCOME: The website address and template was established in early 2002. Current web address is www.cheetahinterestgroup.com. The company "Web Trends" is in place to track visitor activity at the CIG website.

ACTION STEP 3:

GCF web master will request input directly from GCF membership, until the secretariat has access to a CIG list-serve (see Solution 2, Action Step 1) for input onto URL links, and other items to include on website. This will include contributions to a GCF "News Update", to be accessible via the website (see Solution 2, Action Step 2).

RESPONSIBLE: Steve Hines.

TIMELINE: E-mail request from web master during August 2002, web update November 2002, and continued requests/updates every 4 months thereafter.

MEASURABLE OUTCOME: As of July 2002, the website is a simple template awaiting input on content from membership. The outcome will be measured by number of ongoing submissions by GCF members and website visitor activity.

ACTION STEP 4:

Reciprocal links will be established between the CIG website, CIG stakeholder websites, and other related websites (e.g., IUCN Cat Specialist Group; AZA Cheetah SSP; CCF; De Wildt Cheetah and Wildlife Centre; Marwell Zimbabwe Trust; AZA, EAZA, PAAZAB and other regional zoo organizations)

RESPONSIBLE: Steve Hines

TIMELINE: August 2002

MEASURABLE OUTCOMES: July 2003, Steve Hines will confirm that links are in place with a variety of GCF members and related organizations. At this time, he will solicit additional links from GCF members not already participating in this action.

SOLUTION 2:

Develop mechanism(s) to promote effective communication among GCF members.

ACTION STEP 1:

A secretariat should be identified by GCF members. The GCF web master has committed to creating a list serve to facilitate the process of communication between the secretariat and GCF members. A budget should be established and adequate funding secured to support the functions of the secretariat.

RESPONSIBLE: GCF members identified Yolán Friedman as the GCF Secretariat at the 2002 CAP Workshop. Steve Hines will create a list serve. The steering committee is responsible for establishing a budget and securing funding.

TIMELINE: Secretariat identified at 2002 Cheetah Workshop. List serve will be accessible by December 2002. A budget will be established and funding secured by December 2002.

MEASURABLE OUTCOME:

- a) The secretariat has been identified.
- b) The list serve will be accessible to members.
- c) The secretariat will have a working budget.

ACTION STEP 2:

Form a "body" (title to be determined by full GCF membership in plenary) to coordinate and sustain actions of the Working Groups. This group will consist of representatives appointed in plenary during the 2002 Cheetah Workshop, who can adequately represent each of the Working Groups.

RESPONSIBLE: In plenary, GCF members will identify and appoint members of the GCF "body" during the July 2002 Cheetah Workshop. This group will meet on a regular basis via electronic communication. An objective of this group will be to carry forth and coordinate the Working Group action steps.

TIMELINE: July 2002.

MEASURABLE OUTCOME: Consensus in the GCF as to the definition of the role of this "body" accomplished at the July 2002 workshop. The group meets electronically to ensure that the action steps are taken.

SOLUTION 3:

The GCF should utilize multiple media options for internal communications.

ACTION STEP 1:

Develop a GCF list serve. Secretariat and GCF members should use this for normal, logistical communications.

RESPONSIBLE: Steve Hines.

TIMELINE: November 2002.

MEASURABLE OUTCOME: The Secretariat is able to communicate to all GCF members using the List Serve beginning no later than November 2002.

ACTION STEP 2:

Develop an electronic, web-based news update. GCF members should be encouraged to post regular updates on new and ongoing activities. Submissions do not need to be restricted to "cheetah projects" but can include anything considered of general interest to GCF members.

RESPONSIBLE: Steve Hines.

TIMELINE: Initial request for submission by August 2002 with a deadline of September 2002 and first posting November 2002. Every four months thereafter, GCF web master (or secretariat as assigned) will request new updates from members. However, GCF members are welcome to submit updates at any time.

MEASURABLE OUTCOME: There will be a total of three news updates during the period of July 2002 through July 2003.

ACTION STEP 3:

A future goal is to investigate the inclusion of GCF news updates into printed newsletters of other relevant organisations (e.g., IUCN Cat Specialist Group, CBSG, etc.).

RESPONSIBLE: Yolán Friedmann.

TIMELINE: January 2003.

MEASURABLE OUTCOMES: One or more organisations print all or portions of the GCF news update in their newsletters.

ACTION STEP 4:

GCF members with common interests should continue to have informal dialogue, collaboration and information exchange. When projects are initiated as a result of this informal dialogue, anchor organization(s) should submit project updates for posting on the GCF website.

RESPONSIBLE: Current informal dialogue is occurring between Annie Beckhelling, Jennifer Buff, Verity Bowman, Vanessa Bower, and Kelley Snodgrass regarding initiating vision processes in the Limpopo Province in South Africa, as well as Zimbabwe and Botswana. Additionally, Laurie Marker and Annie Beckhelling are responsible for providing a report on their ongoing school-based education programs, while Vanessa Bower and Deon Cilliers are responsible for reporting on their ongoing farmer education programmes.

TIMELINE: July 2002 and ongoing (reports to GCF news update by the August 2002 update)

MEASURABLE OUTCOME: To be determined using the timelines for the action steps for Issue 1.

Critical Cheetah Populations Working Group Report

WORKING GROUP PARTICIPANTS:

- Laurie Marker (CCF, Namibia)
- Christine Breitenmoser (Cat Specialist Group, Switzerland)
- Gus Mills (SANParks and Endangered Wildlife Trust, South Africa)
- Ali Reza Jourabchian (Iran)
- Behzad Rahgoshai (Iran)
- Anoushirvan Najafi (Iran)

SITUATION OVER-VIEW:

NORTH AFRICA

There is very limited information on cheetah in most of the North and West African range countries. The available information confirms that these populations are critically endangered and a conservation priority. Additionally, there is significant illegal trade in cheetah out of these countries, with animals being confiscated in the UAE.

The Cat Specialist Group has limited contacts in some of these range countries and is building up more relationships. These relationships are sensitive due to difficult political situations and are limited by language and cultures. For these reasons, communication needs to stay directed through the Chairs of the Cat Specialist Group at this time.

The Museum of Natural History of Paris has done extensive work in some North African countries (Niger, Mali, Algeria). A questionnaire was sent out in 2001 to all North and West African countries to define key areas for preliminary surveys. Cheetah samples collected from North Africa are currently being analysed in Paris. In September 2002, this group will be in Niger to conduct an initial survey using photo traps and will also interview local people to collect more base-line data.

Additionally, another group comprising Steve Monfort (Smithsonian's National Zoo CRC), John Newby (WWF-International), Tim Wacher (ZSL), and Jerome Tubiana have been conducting animals surveys in Northern Africa (Chad, Niger). Newby, Wacher, Alexandra Dixon (formerly of ZSL, now a private consultant) and Bill Houston (Curator, St. Louis Zoo) visited Chad in Sept 2001. The primary interest of the group was antelope, although all wildlife sightings were documented and supplemented with interviews (using reference photos) with local peoples. Members of this team also visited Niger in February 2002.

One of CCF staff (Stacey van Syckle) visited Niger in December 2001 and followed up on a cheetah initiative that she started in 1993.

Country projects have been conducted in southern Algeria (Tassili N'Ajjer Range) and Egypt (the Qattara Depression) where small populations are thought to still exist, but this is debatable.

ACTION STEPS

Cat Specialist Chairs will meet with WWF International representative and will find out more about the mission and future plans (10 July 2002).

Cat Specialist group representatives will meet with the team from the Museum of Natural History of Paris to coordinate research efforts and provide advice as to how to best survey the areas for cheetah (August 2002).

Cat Specialist Group will continue to find people in these areas from over-lapping projects to be able to avoid duplication of efforts and resources and coordinate collaborative activities (on-going).

IRAN

During the last 6 months the following activities were undertaken by the Secretariat for Conservation of Asiatic Cheetah in Iran:

1. Carried out activities for promoting the status of selected sites that are the main habitats of Asiatic Cheetah in Iran, as follows:
 - Promoted the status of the Naybandan from a Protected Area to a Wildlife Refuge with the area of 1,500,000 ha.
 - Promoted the status of the Dar Anjir from Hunting Prohibited Area to Protected area with the area of 15,000 ha.
 - Promoted the status of the Khartooran from Wildlife Refuge to National Park with the area of 800,000 ha.
2. Controlled illegal poaching of cheetah and increased the fine from 2500 US\$ to 12500 US\$.
3. Project Secretariat was visited by many international experts during last 6 months (about 136 persons per day) and organized to visit selected sites of the project.
4. Took about 700 pictures (including 2 pictures of cheetah in Naybandan, 5 pictures of King fox in Naybandan, 17 pictures of hyena in Naybandan and Khartooran) using 6 camera traps.
5. Recognised traditional water and grazing rights in parks and protected areas and started to buy up such as Majerat in Khartooran National Park.
6. Hired, trained and deployed 25 game guards for strengthening conservation issues in the parks and protected areas.
7. Prepared the GIS maps with the collaboration of WCS and DoE experts for selected sites.
8. Studied the behaviour of the hyena an important rival In the Wildlife Refuge of Naybandan.
9. Prepared necessary equipment for the game guards.
10. Purchased 3 vehicles for the selected sites.
11. Allocated 13 motorcycles for the selected sites.
12. Collaborated with WCS, CCF, IUCN and Cheetah Breeding Research Centre in Dubai.
13. Visited CCF in Namibia for initial training in telemetry and animal handling techniques.
14. Established and equipped 5 new guard stations in Naybandan and Khartooran.
15. Prepared 1:100,000 maps for the protected areas.
16. Initiated public awareness activities to promote conservation activities related to project goals including brochure and a cheetah calendar (in 5000 triages).
17. Tracked cheetah and its rivals inside the selected sites.
18. Collected 28 skeletons of preys which were killed by cheetah.
19. Developed a www.asiaticcheetah.org website.
20. Held 3 workshops for training the game guards.
21. Worked with one of the NGOs (ICS) in collaborative management inside the selected sites and Tehran.
22. Collected and compiled about 250 pages of daily reports of guards in CACP secretariat.
23. Prepared about 15 hours' of movies and about 1800 pictures of all the missions inside the selected sites.
24. Established an archive of the movies and pictures.
25. Reported sighting of about 27 cheetah in the selected sites by the game guards during last two months.
26. Translated all the reports and correspondence into Farsi.

As the Secretariat secured the support of the President of the Republic for considering conservation of Asiatic cheetah as a high priority, project activities resulted in the following influences on conservation of Asiatic cheetah in the natural habitats:

- The number of game guards increased about 70% in the selected sites.
- The number of vehicles and motorcycles increased about 50% inside the selected sites.
- The amount of necessary equipment increased about 100% for the guard stations in the selected sites.
- The number of field visits by experts increased about 300% inside the selected sites.
- The number of the guard stations increased about 60% inside the selected sites.
- The number of the general directors visits from provinces increased by about 300% inside the selected sites.
- The number of UN and DoE representatives visits increased during this period, which has been a source of encouragement for the game guards in the selected sites.

NEXT STEP: INCEPTION MISSION

Background

The Inception Mission is a part of the UNDP/ DOE GEF Conservation of the Asiatic Cheetah Project (CACP). The Cheetah Conservation Fund (CCF) and DoE will manage and carry out a multi-disciplinary Inception Mission to achieve the overall goals of the project. CCF will work in a collaborative fashion with the Wildlife Conservation Society (WCS), which is providing two activities to support the CACP, in order to have a well-coordinated project. These organisations intend to work closely together to develop a strong, science-based approach to the work. Sequencing activities of the project will ensure that they are complementary and that the information collected at each stage feeds into the next stage.

The Inception Mission will assemble and coordinate a multi-disciplinary team of national and international technical specialists relevant to the issue of cheetah conservation in the Islamic Republic of Iran. This team will utilise cheetah distribution information generated by the Rapid Biological Survey to locate initial study and action sites along with historic information relevant to cheetah survival in Iran. The team will use its expertise at these sites to undertake a detailed analysis of local habitat and socio-economic and cultural investigations related to the cheetah.

To a certain degree, the Inception Mission will study the situation and role of relevant stakeholders at the sites and within the governmental and non-governmental structures of I.R. Iran. After the Inception Mission, these stakeholders will be assisted to organize a system of collaborative management for the conservation and rehabilitation of the cheetah, its habitat and associated species. In addition to stakeholders, the Inception Mission will assist in identification and preparation of like-minded partners for long-term engagement in the aims of the project.

The Inception Mission will organise and facilitate the National Inception Workshop. Participants will be suitable representatives of many partners. Goals of the workshop are to bring together all partners including government bodies, NGOs, local and international community groups and experts.

1. Identify root causes for each of the key areas;
2. Discuss solutions;
3. Develop action steps to solve the problems – i.e. short, medium and long term, to identify collaborations among government departments, the local communities and the international community.

ACTION STEP 1:

Formalise the Inception Mission Agreement, and sign the contract so that the process can move forward.

Before anything can move forward a formal agreement must be signed between DoE, UNDP and the NGO that has been selected to carry forward the Inception Mission – this has been agreed verbally to be CCF. This agreement needs to be signed at least 4 months before the Inception Mission is implemented.

This will take place by 15 August 2002 - Mr. Najafi will sign the contract.

Possible Dates for the Inception Mission: (19 days – 2 travel – 17 days for the Mission (in field 12 days) and workshops (5 days):

13 January to 31 January 2003 (1st choice) or 2 December to 20 December 2002

ACTION STEP 2:

Establish technical advisory team of about 20 people.

A joint National and International team will go to 4 identified sites as follows:

- Naybandan W.R
- Kavier N.P
- Bafgh/Daranjir W.R
- Khar Tooran N.P

Types of specialists for each team

1. DoE
2. Ecologist
3. Socio-economist
4. Reserve Manager
5. NGO

Possible International Technical Specialists

- CCF – Laurie Marker, Cynthia Olson
- IUCN Cat Specialist Group – Gus Mills (field and workshop), Urs/Christine Breitenmoser (field and workshop)
- Someone from WCS – George Schaller, Tim O'Brien or Peter Zahler (international education as well as ecologist)
- Chris Weaver/Alister Bath socio-economist

National Groups to be coordinated by Mr. Najafi and Ali Reza Jourabchian. The following people are who are currently recommended and alternatives will be identified later.

CACP:

- Ali Reza Jourabchian
- Behzad Rahgoshai

DoE:

- Mohammad Roshanzamir
- Hessam Hosseini
- Bahman Najafi
- Ahmad Ajami
- Mostafa Khalili
- Shirin Aboulghasemi
- Mehran Niazi - GIS

Iranian Cheetah Society (NGO):

- Mohammad Farhadinia, Morteza Eslami, Kaveh Hatemi

Socio-economist

- This needs to be someone from the national level – to be identified by DoE.

University:

- Mehdi Farafpoor
- Mahmood Karami

Local Environmental Lawyer (possible a University professor that Mr. Najafi knows).

ACTION STEP 3:**Prepare a briefing book.**

Compile the data collected over the past 6 months+ that includes the Rapid Survey Team findings as well as all earlier information that will serve as background to the Inception Mission to be ready – Cynthia Olson, Behzad Rahgoshai and Ali Reza Jourabchian and will be done in cooperation with WCS and a DoE GIS specialist.

Compile and, where necessary, translate materials for a Briefing Book for the National Inception Mission Team. The Briefing Book will be added to as the Mission Team continues to collect information. The Briefing Book will be used at the National Inception Mission Workshop and will create a valuable reference work for all future studies of cheetah or predator-conflict issues in I.R. Iran. An advance team of nationals and National Inception Mission Team members will contribute relevant briefing materials for the book.

Contents of the briefing book will include the following:

- Maps of the study areas that will include:
 - All previous information on cheetah and prey distribution and other relevant species, mapped as best as possible
 - Location of water points in and around the study areas.
 - Communities around the reserves, densities of people and livestock if possible (or described in text)
 - Vegetation, rainfall, and topographical maps
- Overview of numbers of people and livestock, husbandry system, socio-economic status of study area communities, including cultural, economic and political (village leaders)

backgrounds, livelihoods, and infrastructure such as industries and businesses, schools and mosques.

- Summary of relevant I.R. Iran laws and regulations pertaining to wildlife and land users' rights. We need international laws or regulations, and on the national level as well as regional level, therefore, there are several levels that are necessary.
- Flow chart or list that include responsible people from government, NGOs, universities and other institutions.
- Initial reports from the Rapid Biological Survey Team that will include assessment of threats and root causes that put the cheetah, its ungulate prey base, and habitat at risk.

The sources of this information may include:

- Yazad Province Culture and Tourism organisation (?)
- GEF with the Ministry of the Interior, along with Governor for the Yazad Province (title: living and coping with desert)
- Agriculture Department for livestock numbers for the areas – GEF and Agricultural Department be a source of information.

ACTION STEP 4:

Field visit. The technical advisory team will go to the areas identified above for a reconnaissance survey of the area and meet community groups to hear their issues, requiring about 10 days. The group will then convene to summarise data and prepare for the Inception Mission Workshop. DoE will provide transportation – will look at getting a mini-bus to get to the province – then once in the reserve, smaller reserve vehicles will be used.

Ideas of places to stay:

Semnan Province: 1- Delbar st.
2- Abbas Abad st.
3- Bahram Palace
Yazd Province: 1-Ali Abbad st.
2- Florin st.
4- Bafgh st.

Travel Schedule:

Day 1: Arrive, meet each other and drive from Tehran to Kavir (approx 3 hours)
Day 2: Spend day in and around Kavir
Day 3: Travel from Kavir to Turan – approximately 7 hours
Day 4: Spend day in Turan
Day 5: Spend day in and around Turan
Day 6: Travel to Naybandan – approximately 10 hours
Day 7: spend day in Naybandan WL refuge – (south central) visiting the cheetah area in the morning and the local people in Naybandan in the afternoon.
Day 8: Travel to Aliabad – travel 10 hours to florinmine (north west of Naybandan)
Day 9: Travel to Bafgh reserve – approximately 5 hours
Days 10 to 11: visit villages in and around Bafgh reserve
Day 11: Travel to Daraanjir – approximately 4 hours
Day 12: Drive from Daraanji to Yazad - approximately 2 hours then fly from Yazad to Tehran

What to do at each stop:

- Meet Semnan and Yazad Province Directors
- Visit the area
- Talk with the game guards and the area manager

Behzad will coordinate with the regional biota area directors to prepare all the selected items from the reserves that are necessary including maps and these will be a part of the briefing book.

Meetings in Kavir, Turan, Naybandan and Bafgh areas will be planned ahead of time with the local people. These meetings should be coordinated and be set in cooperation with the director of the province and should include representatives of local communities, local NGO's, government and local officials (i.e. agriculture, mining and roads representatives), educational and health representatives, religious leaders and other relevant partners.

Budget: A final budget for the travel, housing and food will be prepared by Cynthia and Behzad.

ACTION STEP 5:

Technical advisory team Action Plan Workshop. At the conclusion of the information-gathering phase of the Inception Mission, the Inception Mission Coordinating Group will convene in Tehran for 2 days for the finalisation of the data collected in the field and to prepare recommendations and Action Steps for presentation to the National Group Workshop. The workshop will be in a facilitated format to discuss, debate, and arrive at an understanding of the current state of cheetah in I.R. Iran, including the major threats to the cheetah populations and underlying causes of those threats.

The facilitated workshop will help participants to:

- Identify emergency conservation measures and long-term approaches to the conservation of cheetah.
- Generate specific recommendations concerning further project activities that include timing, goals and modalities to promote collaborative management.
- Develop a preliminary list of local community stakeholders and other relevant stakeholders in present and potential cheetah habitats.
- Develop draft recommendations for strategies and action plans.

ACTION STEP 6:

National Group Information Day. Organise a 1- day presentation/feedback/question and answer workshop to review the findings and recommendations of the technical field team from their rapid fact-finding appraisals including the results of the rapid biological surveys within the identified cheetah biotic areas. Workshop participants will include representatives of certain stakeholder groups.

100 people – DoE will develop the list of attendees

Locality: Faculty of Environment in Karaj or Conference hall in Pardisan Eco Park.

People will overnight at the Simorgh Hotel (should be checked)

Facility: The DoE has a conference facilitator/organiser who will prepare all food and will take care of all transportation (logistic arrangements).

A special invitation will be made to other cheetah specialists who would be interested in joining the workshop. Their food will be covered by the project. Travel and accommodation would need to be covered by the individual.

Facilitation Process:

One or two facilitators will work together to provide necessary guidance through the process so that all partners feel represented and included in the process and so DoE has a final document that will allow them to accomplish their goals. The facilitated process will be determined.

DoE will identify a facilitator who has extensive expertise in this field.

ACTION STEP 7:

Wrap up Workshop. The technical field team will then re-convene with DoE partners for a 2-day workshop to compile the comments from the National Group Workshop into the final recommendations for strategies and action steps.

Cynthia and Behzad will finalise the budget for housing, transport and food.

Group Prioritisation of Integrated Goals and Solutions

Each working group brought their top four or five solutions, chosen by means of paired ranking of each group's total list of solutions, to a plenary session where they were combined into a list of 25 solutions for the whole group. Each person then went back and pair-ranked this list of twenty-five solutions in order to arrive at a prioritised list of solutions for effective conservation of cheetah globally upon which the whole group had agreed and contributed towards. The results were as follows:

Order	Score	Solution
1	462	Improve the information available to educate people actively living with cheetah about basic cheetah ecology, the importance of cheetah in an ecosystem, livestock management, game management, the value of conservancies and identification of predators responsible for killing stock animals (livestock or game).
2	443	Education material needs to be passed onto to the people actively living with cheetah. This will require individuals involved in nature conservation (extension workers, agricultural people, biology students, farmers / farmers wives, sociologists and community based NGOs) to be made aware of the issues and shown how to explain them to people living on the land. Each type of person / group needs suited to the task of getting the information across to the various groups of people living with cheetah.
3	433	Identify key representatives of stakeholders in the range states from which sub-regional and regional cheetah forums can be set up to address the issues of conflict within and between countries and work towards resolving conflict. These forums will be used to identify key people within those countries to act as spokespersons and role models.
4	404	Ongoing research to understand more about the role of a cheetah in the ecosystem outside protected areas.
5	397	Convene a workshop to identify possible census techniques.
6	376	Encourage frequent and regular communication within the working group and between landowners and government.
7	372	The knowledge base regarding free-roaming cheetah is lacking and more information may identify other issues. The knowledge base must be expanded to more effectively conserve cheetah outside of protected areas. There are many sources of available information and it is necessary to access as much of this knowledge as possible (scientific, anecdotal, tribal and agricultural).
8	365	Develop and disseminate a cheetah conservation database including <i>in situ</i> and <i>ex situ</i> projects, people, status of the cheetah, annual reports, and reference materials.
9	333	Develop a list of contacts from experts in the region that might have useful information to begin or enhance conservation initiatives. Assist these contact people by inviting them to the next cheetah workshop and/or helping to organise a conservation management planning workshop in the northern and/or western African region(s).
10	330	To use priority techniques in identified areas with known cheetah population sizes.
11 (tie)	324	Where no immediate co-existence is possible cheetah should be removed and relocated into parks or reserves and captive situations where they will have to be managed as meta-populations and become part of a global management plan (captive/meta-population)

11 (tie)	324	Conduct censuses of cheetah in representative habitats within key range states and analyse results.
11 (tie)	324	To start the visioning process for education in other regions or range countries.
12 (tie)	232	Develop a CIG / GCF website
12 (tie)	323	Raise general awareness for the need for census data on wild cheetah populations.
13	306	Whenever access to wild cheetah is possible, conduct disease surveillance using standardised methods in all range countries. As well as a full clinical workup, studies should be conducted on cheetah in range countries to determine the health status of the wild population. Of particular importance to biopsy are older cheetah, cheetah that have previously been caught, and cheetah with signs of disease. Diseases should be compared among regions/facilities/populations. Availability of this information must be assured.
14	296	Develop mechanism(s) to promote effective communication between GCF members.
15	277	Complete and distribute standardised protocols, datasheets and sample collection sheets and encourage all personnel who handle cheetah to use these protocols whether opportunistically or as part of a research study.
16	259	To provide detailed information necessary to raise public awareness and to assist fundraisers to support highest priority cheetah projects
17	243	Develop a global programme (genetic and demographic) for managing captive cheetah.
18	231	A comprehensive assessment of management conditions of captive cheetah should be conducted using a standardized evaluation form that includes information on exhibit site and structure including but not limited to proximity to predators, size of enclosure, exhibit substrate and design, public access, enrichment activities, exercise, diet, staff expertise, and veterinary care.
19	225	Optimise sample storage and collection. Archival information from the Cheetah BRB database may be made available via a web site and/or an email interest group list with approval of submitters (legal owners). This third party biological bank will maintain biological samples for researchers and managers and may provide samples to others subject to the approval of legal owners.
20	221	Continue and update captive population disease surveillance. Health status data should be collected for comparative purposes from a wide range of African, European and Australian facilities using standardized surveillance methods. Many regions now have zoo organisations that can facilitate data/sample collection among member institutions. Data should then be compared among regions and facilities.
21	176	The CIG needs to utilise multiple media options for internal communications.
22	172	Continue to utilise assisted breeding (such as artificial insemination) with cryopreserved gametes from wild cheetah as a means for contributing to the genetic management for <i>ex situ</i> populations.

The top five solutions were, in order of priority:

- Improve the information available to educate people actively living with cheetah about cheetah basic ecology, the importance of cheetah in an ecosystem, livestock management, game management, the value of conservancies and identification of predators responsible for killing stock animals (livestock or game).

- Education material must be passed onto to the people actively living with cheetah. This will require individuals involved in nature conservation (extension workers, agricultural people, biology students, farmers / farmers wives, sociologists and community based NGOs) to be made aware of the issues and shown how to explain them to people living on the land. Each type of person / group needs suited to the task of getting the information across to the various groups of people living with cheetah.

- Identify key representatives of stakeholders in the range states from which sub-regional and regional cheetah forums can be set up to address the issues of conflict within and between countries and work towards resolving conflict. These forums will be used to identify key people within those countries to act as spokespersons and role models.

- Ongoing research to understand more about the role of a cheetah in the ecosystem outside protected areas.

- Convene a workshop to identify possible census techniques.

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SECTION 5

DEVELOPMENT OF THE GLOBAL CHEETAH FORUM

Development of the Global Cheetah Forum

(previously the Cheetah Interest Group - CIG)

WORKING GROUP PARTICIPANTS:

Present for the entire working group discussion:

- Dave Wildt
- Diana Reuter-Twinning
- Bonnie Schumann
- Adrienne Crosier

With contributions from:

- Gus Mills
- Christine Breitenmoser
- Laurie Marker
- Yolán Friedmann
- Behzad Rahgoshai

INTRODUCTION:

The Cheetah Interest Group (CIG) was borne out of the Global Cheetah Action Plan workshop held in 2001 as a means of uniting the stakeholders in cheetah conservation globally and promoting improved communication and collaboration among parties. It was seen as a means of continuing the processes started at the workshop, of collaborative research and conservation, open communication and partnership building. At this workshop, it was decided that the 2002 workshop would serve as a forum to further develop this group and to establish a set of objectives, operational guidelines and goals to ensure that the group fulfils its mandate to serve the interests of the cheetah conservation community at large.

During the course of the 3 day Cheetah Action Plan Review workshop held in 2002, a small group of participants met to work on specific organisational issues which were reported back to the group, and openly discussed during plenary sessions. The issues discussed were identified by the group as a whole in an open floor brainstorming session. These issues were refined and a final list of what the workshop members felt needed addressing became the goals of the working group.

ISSUES:

Issues Generated by Brainstorming Session:

- Endorsements of projects
- Fundraising / don't fundraise
- Biomaterials and developing banks
- All inclusive participation
- CIG meetings in other range countries (rotational)
- Marketing
- Relationship to IUCN / Cat Specialist Group (CSG) / Conservation Breeding Specialist Group (CBSG)
- Ethics
- Website and communication

- Follow-up after meeting / workshop
- More captive breeding

Refined List of Issues:

1. **Name** Change
2. Generate a **mission statement** for the organisation
3. Define the **goals and objectives** of the organisation
4. Outline the guidelines of **membership**
5. Outline internal **structure** and organisation

1. NAME CHANGE

Brainstorming for Name Change Suggestions:

With the option for International in front of each:

1. Cheetah Interest Group
2. Cheetah Task Group
3. Cheetah Conservation Group
4. Cheetah Forum
5. Cheetah Conservation Development Forum
6. Cheetah Interest Forum
7. Cheetah Working Group
8. Cheetah Action Group
9. Cheetah Lovers

International / GLOBAL CHEETAH FORUM was chosen as the new name for the organisation / group after a group vote.

2. MISSION STATEMENT:

What is the GCF?

The Global Cheetah Forum is a partnership of people and organisations that promote and catalyse cheetah conservation internationally. The following mission statement was developed for the group:

The Global Cheetah Forum aims to ensure the survival of the cheetah through integrated conservation, education and research programmes

3. GOALS & OBJECTIVES:

1. Support a forum for creating and disseminating information, tools and strategies.
2. Provide a platform for exchange of information.
3. Support conservation management, education and research (endorsement of ethics).
4. Provide a link between *in situ* and *ex situ* cheetah conservation.
5. Promote the creation and dissemination of educational strategies and tools (public awareness).

4. MEMBERSHIP:

Criterion: Anyone who has the capacity to promote the mission and objectives of GCF

Discussion points:

- Membership open to people (individuals) interested in cheetah conservation.
- Annual meetings open.
- Promotes organisation, commitment and action.
- Develop a “friends of the cheetah” group in association with GCF membership ?
- All participants the 2001 and 2002 workshops are considered members
- Tiered? No tiered membership.
- Fees?
- Not in support of limiting membership in any way.
- What would be the benefit for a farmer specifically becoming a member?
- Are we going to actively solicit members?
- Is the membership only going to advertised by word-of-mouth and website?
- Indication that most of the stakeholders will never have access to a website.
- Membership committee, screening / application ??

Advantages of reviewing applications:

- Exclusion of people or organisations who contradict the mission and objectives of GCF
- Strengthening of credibility
- Increases and broadens the support structure of GCF
- Suggestion that we need to define how we are going to organise our membership
 - Open to everyone
 - Some screening
- Reiteration of the need for membership selection to be based on activity.
- Farmers illegally and indiscriminately shooting cheetah should possibly become members in order to increase communication.
- School children that are not involved actively with conservation are stakeholders and should become members.

Final Decision:

- Membership open to all.
- No tiered membership structure or fees.
- An application form is completed and submitted to the secretariat and evaluated by the steering committee.
- Membership open to people (individuals) interested in cheetah conservation.
- Annual meetings open.
- Workshop participants are automatic members.

5. STRUCTURE

A number of issues were tackled under the heading of GCF structure, as follows:

5.1. PROJECT ENDORSEMENT:

Discussion points:

- Support for very small organisations and/or individuals may assist them to grow and gain political support
- Project development vs. project endorsement vs. project support

- Concern that the idea of GCF endorsing projects (and not endorsing projects) will alienate certain cheetah research / interest groups
- Endorsement of projects by committees seems to generate fear that the steering committee will have too much power

Final Decision:

The GCF as a group will not become involved in endorsement of projects or groups.

5.2. AFFILIATIONS:

Discussion points:

- Relationship to IUCN (i.e.: CSG, CBSG)
- The GCF receives credibility through affiliation with the IUCN - World Conservation Union's Cat Specialist Group and Conservation Breeding Specialist Group of the Species Survival Commission
- Connection with IUCN should be a loose partnership as it provides credibility.

Final Decision:

- Through being managed by CBSG South Africa, the GCF is ALREADY affiliated to the IUCN. Association with the CSG will also be sought.

5.3. STEERING COMMITTEE AND SECRETARIAT:

Discussion points:

- one member from each of the subgroups on the committee??
- Composition: must be balanced among countries and organisations and expertise.
- A member from each "key organisation" on steering committee.
- Proposal to make the steering committee completely open.
- Meeting frequency of both the GCF and the Steering Committee.
- Suggestion that the GCF is too young and too new to have a steering committee.
- Converse proposal that to make the GCF work and have organisation there is an absolute need for a steering committee.
- Proposal the GCF steering committee is necessary for implementing actions and assisted secretariat.
- Suggestion that without a steering committee we will only lose time and not gain strength.
- Proposal for an action committee rather than a steering committee.
- Action committee would act as a democratic filter for everyone's voice.

Final Decision:

A steering committee will be established, with no sub-committees. This SC will be open to any GCF member and will be selected by means of a voting system.

1. Comprising no more than 10-12 members
2. Tenureship of individuals of a 2-year period; renewable
3. Steering committee will determine how often they need to meet to accomplish their goals.

STEERING COMMITTEE ROLES:

1. Monitor the progress of the action plans emanating from the annual meeting
2. Take necessary measures to ensure that the actions are implemented
3. Provide support and generate funding for the secretariat
4. Coordinate the affiliation with the IUCN – World Conservation Union
5. Provide guidance and monitoring to other GCF members
6. Promote continuity, organisation and commitment to action
7. Evaluate membership applications

SECRETARIAT ROLES:

The secretariat supports the network, mission and objectives of the organisation

Specifically:

- Organise communication within the membership (largely electronically).
- Plan and facilitate GCF meetings.
- Participate in public awareness initiatives and public relations relevant to the GCF mission.
- Responsible for maintaining a budget within the Endangered Wildlife Trust.
- Acts as interim manager of the GCF website; may become permanent depending on formation of a subcommittee on information technology.
- Coordinate and disseminate database information.
- Manage the GCF list serve.
- ***The secretariat should always be based in a cheetah range state***

Possible sources of funding for the secretariat and the roles of the secretariat:

- NGOs (i.e.: North American Cheetah SSP)
- Private Funding
- Corporations

STEERING COMMITTEE:

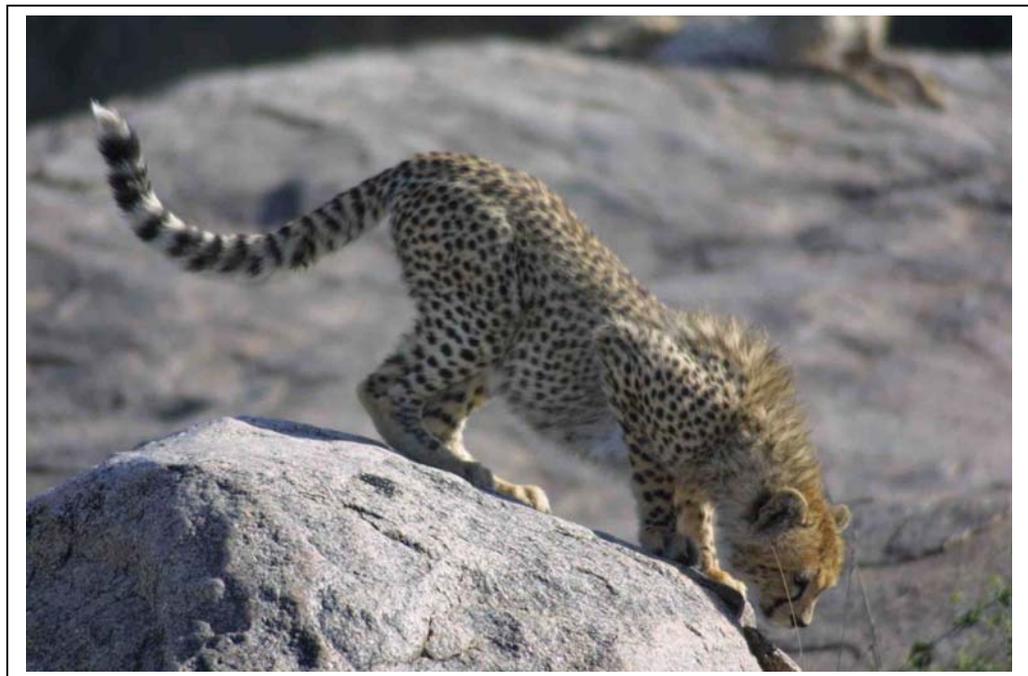
After a vote, the following list was nominated to the GCF steering committee:

MEMBER	COUNTRY	WORKING GROUP
1. Yolán Friedmann	South Africa	Secretariat
2. Laurie Marker	Namibia	Iranian cheetah
3. Vanessa Bouwer	South Africa	Education
4. Sarah Durant	Tanzania	Census
5. Nettie Purchase	Zimbabwe	Protection outside protected areas
6. Paul Bartels	South Africa	Health
7. Deon Cilliers	South Africa	Protection outside protected areas
8. Jack Grisham	USA	<i>In situ / ex situ</i>
9. Linda Munson *	USA	Health
10. Martin Mulama	Kenya	Census
11. Sean McKeown *	United Arab Emirates	Iranian / North African cheetah
12. Behzad Rahgoshai	Iran	Iranian cheetah
13. David Wildt	USA	<i>In situ / ex situ</i>

** (not present / agreement to join this committee pending)

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SECTION 6

APPENDICES

Appendix I. List of Workshop Participants

Name		Photo	Position	Organisation	Country	Postal address	Fax number	Telephone number	E-mail address
1.	Bagot-Smith Arthur		Veterinarian	Private	Namibia	P.O. Box 165 Otjiwarongo Namibia	264 67 302147	264 67 302148	bagot@iway.na
2.	Bartels Paul		Wildlife Biological Resource Centre / EWT	WBRC Director	South Africa	P.O. Box 582, Pretoria 0001	(0) 12 305 5840	(0) 12 305 5840	paulb@wbrc.org.za
3.	Beckhelling Annie		Cheetah Outreach Cape Town	Director	South Africa	P.O. Box 116 Lynedoch, 7603 South Africa	021 881 3634	021 425 3008 or 082 491 0231	cheetah@intekom.co.za
4.	Bouwer Vanessa		De Wildt Cheetah & Wildlife Centre,	Deputy Director	South Africa	PO Box 16 De Wildt 0251	(012) 504 1556	(012) 504 1921	cheetah@dewildt.org.za
5.	Bowman Verity		Marwell Zimbabwe Trust	Director	Zimbabwe	P.O.Box 3863, Bulawayo, Zimbabwe	+ 263 11 625217	263) 9 280029 or 280030	vbowman@mweb.co.zw

6.	Breitenmoser Christine		IUCN Cat Specialist Group	Co-chair	Switzerland	c/o KORA Thunstr.31, 3074 Muri b. Bern, Switzerland	+41-31-951 90 40	+41-31-951 90 20	ch.breitenmoser@kora.ch
7.	Bristow Pamela	No Pic	Dept of Environmental Affairs & Tourism	Environmental Officer	South Africa	Private Bag X 447, Pretoria 0001	(012) 320 7026	(012) 310 3930	pbristow@ozone.pwv.gov.za
8.	Buff Jennifer		Smithsonian / National Zoo - CRC	Education Programme manager	USA	1500 Remount Road, Front Royal, VA 22630 USA	(540) 635- 6540	(540) 635- 6506	jbuff@crc.si.edu
9.	Cilliers Deon		National Cheetah Management programme / De Wildt Cheetah Centre	Chairman of the NCMP	South Africa	PO Box 52071 Dorandia 0188	(012) 546 0403	(012) 546 0403	ncmp@dewildt.org.za
10.	Crosier Adrienne		National Zoo – Washington / CCF	Post-doctoral student	USA / Namibia	P.O. Box 1755 Otjiwarongo Namibia	+ 264 (0) 67 306-247	+ 264 (0) 67 305 225	snzpsci@iway.na
11.	De Wet Thys		Hoedspruit Endangered Wildlife Foundation	Cheetah Rescue Unit	South Africa	P.O. Box 1278 Hoedspruit 1380	015 793 1646	015 793 1633 / 072 267 0634	info@cheetahresearch.co.za
12.	Dinon John		Cincinnati Zoo	Director of Animal Conservation programmes	USA	3400 Vine Street Cincinnati, OH 45220, USA	(513) 569- 8222	(513) 569- 8213	john.Dinon@cincyzoo.org

13.	Durant Sarah		Serengeti Cheetah Project	Research Fellow / Project leader	Tanzania / UK	Zoological Society of London, NW1 4RY, UK OR Serengeti Cheetah Project, TAWIRI, Box 661, Arusha, Tanzania	020 7449 6688 0255 28 262 1542	020 7483 2237	sarah.durant@ucl.ac.uk cheetah@habari.co.tz
14.	Friedmann Yolán		CBSG South Africa / EWT	Project Manager	South Africa	P.O. Box 731, Lanseria 1748	(0) 11 701 3811	(0) 11 701 3811	cbsgsa@wol.co.za
15.	Grisham Jack		Oklahoma Zoo	Cheetah SSP Coordinator	USA	313 Partridge Lane Edmond, OK 73034 USA	(405) 425-0251	(405) 348 8256	jmgcheta@aol.com
16.	Henghali Josephine		Cheetah Conservation Fund	student	Namibia	P.O. Box 1755, Otjiwarongo Namibia	+ 264 67 306 225	+ 264 67 306 247	cheeta@iafrica.com
17.	Hines Steve		Private	private	USA	Post Office Box 58 Aldie, VA 20105 USA	/	703 327-3243	SHines3243@aol.com

18.	Jourabchian Ali Reza		Dept of Environment	Manager Iranian Cheetah Project	Iran	Natural Environment research centre, Hemat, Tehran	00 98 (21) 826 9912	00 98 (21) 826 9915	ali_jourabchain@yahoo.com / manager@asiaticcheetah.org
19.	Klein Rebecca		Mokolodi Nature Reserve	Manager	Botswana	P.O.Box 170 Gaborone,	267 561 955	267 565 488 718 96705	Sanctuary@mokolodi.com
20.	Lane Emily		Private	Veterinary Pathologist	South Africa	P.O. Box 556 Derdepark 0035	+ 27 12 808 5775	+ 27 72 297 6571	emily.lane@hixnet.co.za
21.	Lombardi Dusty		Columbus Zoo, Ohio	Living Collection director	USA	9990 Riverside DR.Powell, Ohio 43065	(614) 645-3465	(614) 645-3458	dlombard@colszoo.org
22.	Loskutoff Naida		Henry Doorly Zoo	Reproductive physiologist	USA	3701 South 10 th Street, Omaha, NE 68107 USA / 3 Upper Park Drive, Forest Town, Gauteng 2193 RSA	402 738-2008 in South Africa: 072-203-7000	(402) 733-0490	naidal@omahazoo.com
23.	Louwmann Jan		Wassenaar Wildlife Breeding Centre	Director	Holland	Raaphorstlaan 28, Wassenaar, 2245 BJ, Holland	0031 705 1192 68	0031 705 1780 28	wwbc@planet.nl

24.	Maritz Riaan		Private	Private	South Africa	33 Atlas Street Herlear Kimberley, 8301	(082) 871 9987	(053) 831 6324	riaanm@Intekom.co.za
25.	Marker Laurie		Cheetah Conservation Fund	Executive Director	Namibia	P.O.Box 1755, Otjiwarongo, Nambia	(264) 67 306 225	(264) 67 306 247	cheeta@iafrica.com.na
26.	Mills Gus		EWT / South African National Parks	Carnivore Conservation Group chair / specialist scientist	South Africa	P. Bag X402, Skukuza, 1350	013 – 735- 4055	013- 735- 4240	GusM@parks-sa.co.za
27.	Mulama Martin		Kenya Wildlife Services	Senior research scientist	Kenya	PO Box 40241, Nairobi, Kenya	254-2- 501081	254-2- 60379	Biomass@kws.org
28.	Najafi Anourshiarvan		Dept of Environment	Deputy Head of DoE	Iran	Natural Environment research centre, Hemat, Tehran.	00 98 (21) 826 9912	00 98 (21) 826 9913	najafi@abedi.net
29.	Prangley Mark		National Cheetah Management Forum	Field officer	South Africa	PO Box 16 De Wildt 0251	(012) 504 1921	(012) 504 1921	wcm@dewildt.org.za

30.	Purchase Duncan		Independent consultant	Private	Zimbabwe	P.O Box 2633, Bulawayo, Zimbabwe	+ 263 9 283 403	+ 263 9 280030	dnp@icon.co.zw
31.	Purchase Nettie		Marwell Zimbabwe Trust	Carnivore programme officer	Zimbabwe	P.O Box 3863, Bulawayo, Zimbabwe	+ 263 9 280029	+ 263 9 280030	dnp@icon.co.zw
32.	Rahgoshai Behzad		Dept of Environment	deputy programme manager	Iran	Natural Environment research centre, Hemat, Tehran	00 98(21) 826 9912	00 98 (21) 826 9915	deputy@asiaticccheetah.org and rahgoshai@hotmail.com
33.	Twining Diana		African Conservation Science Centres	Board member	USA	P.O. Box 552 Aldie, VA 20105 USA	+ 703 327 5322	+ 703 327 5333	Dreutertwi@aol.com
34.	Schumann Bonnie		Cheetah Conservation Fund	Research Assistant	Namibia	P.O.Box 1755, Otjiwarongo, Namibia	(264) 67-306247	(264)67-306225	cheeta@iafrica.com.na
35.	Smuts Ronel		Al Wathba Cheetah Centre	Wildlife Manager	United Arab Emirates	P.O. Box 32909 Abudhabi UAE	+ 971 2 583 9920	+ 971 2 583 9920	wrsmut@emirates.net.ae

36.	Snodgrass Kelley		Fossil Rim Wildlife Centre	Animal Care Coordinator	USA	PO Box 2189. Glen Rose, Texas 76043 USA	+ 254 897 3785	254 897 2960 x 318	kelleys@fossilrim.org
37.	Strachan Alan		De Wildt Cheetah Centre	General manager	South Africa	PO Box 52071 Dorandia 0188	(012) 546 0403	(012) 546 0403	
38.	Tubbesing Ulf		Rhino Park Vet Clinic	Private Veterinarian	Namibia	P. O. Box 50533, Bachbrecht Windhoek, Namibia	09-264-61 257 274	09-264-61 257 272 / 3	ulf@iafrica.com.na
39.	Van Dyke Ann		De Wildt Cheetah & Wildlife Centre	Director	South Africa	PO Box 16 De Wildt 0251	(012) 504 1556	(012) 504 1921	cheetah@dewildt.org.za
40.	Venter Leon		National Zoological Gardens	Veterinarian	South Africa	PO Box 754, Pretoria, 0001	(012) 328 3265	(012) 324 2744	drljv@mweb.co.za
41.	Wildt David		Conservation & Research Centre: Smithsonian National Zoo CRC	Senior Scientist	USA	1500 Remount Road Front Royal, VA 22630	(540) 635- 6539	(540) 635- 6506	dewildt@shentel.net

42.	Wilson Kelly		University of Pretoria	Masters student	South Africa	Centre for Wildlife Management, University of Pretoria, 0002	(082) 477-4470 / (012) 420-2338	(012) 362-2034	Kelly@tuks.co.za
43.	Zulch Helen		Onderstepoort Veterinary Faculty	Behavioural veterinarian	South Africa	Private Bag X4 Onderstepoort 0110		(0) 12 529 8000	hzulch@op.up.ac.za

CHEETAH WORKSHOP AGENDA

6th - 8th July 2002
Shumba Valley Lodge, Johannesburg, South Africa

Saturday 6th July 2002 – Day 1

- 8:00 – 8:30 Arrival and registration
- 8:30 – 8:40 Jack Grisham / Yolán Friedmann: Welcome and opening addresses
- 8:40 – 9:40 Welcome, introduction of participants
- 9:40 – 10:00 Yolán Friedmann: Introduction to the CBSG and CBSG South Africa
- 10:00 – 10:15 Yolán Friedmann: Overview of the GCAP workshop 2001
- 10:15 – 10:30 Jack Grisham: Activities of the North American Cheetah SSP in the past year
- 10:30 – 11:00 TEA BREAK**
- 11:00 – 11:20 Dr. Linda Munson: Progress report on cheetah disease research
- 11:20 - 11:40 Deon Cilliers: Development of the NCMP and the proposed cheetah census
- 11:40 – 12:00 Laurie Marker: CCF updates on cheetah in Namibia and beyond
- 12:00 – 12:20 Nettie Purchase: Cheetah Defrag? Consolidation of suitable cheetah habitat in an increasingly fragmented landscape - Zimbabwe
- 12:20 – 12:40 Annie Beckhelling and Jennifer Buff: Experiences in Teacher Education using Cheetah and other wildlife as Educational Tools in the Western Cape
- 12:40 – 13:00 Behzad Rahgoshai: Conservation of Asiatic Cheetah in Iran
- 13:00 – 14: 00 LUNCH BREAK**
- 14:00 – 14:45 Overview of the workshop process and individual roles, Presentation of Task 1 (updating the situation) and Task 2 (updating issues / problem statements)
- 14:45 – 16:30 Working group session: Tasks 1 and 2
- 15:00 – 15:30 SELF-REGULATED TEA BREAK**



16:30 – 17:30 Plenary on Tasks 1 and 2
17:45 – 18:10 Paul Bartels: Banking cheetah biomaterials in Southern Africa
18:15 – 18:35 Kelly Wilson: Status and distribution of cheetah in Thabazimbi

Sunday 7th July 2002 – Day 2

8:30 – 9:15 Plenary session to brainstorm CIG goals and objectives
9:15 – 9:45 Group discussion of CIG committee composition and “filters”
9:45 – 10:30 Working group begin Task 3: Review of solutions / goals from 2001 Working groups convene and carry on with Task 3

10:00 – 10:30 TEA BREAK and group photos taken

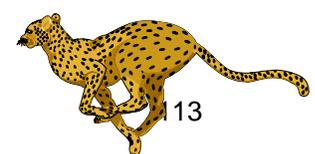
10:30 – 11:30 Working group carry on with Task 3
11:30 – 12:30 Plenary on Task 3

12:30 – 13:30 LUNCH BREAK

13:30 – 16:30 Working Groups convene and begin Task 4: Solution and goal development
(Optional Tea Break)

16:30 – 17:30 Plenary of Task 4

17:45 – 18:15 Christine Breitenmoser: The IUCN/SSC Cat Specialist Group - Who we are, what we do and what we would like to do.
18:20 – 18:40 Gus Mills: How suitable is woodland savannah for cheetah?
18:40 – 19:00 Rebecca Klein: Botswanan Cheetah Programme



Monday 8th July 2002 - Day 3

8:30 – 12:00 Working Groups reconvene and begin Task 5: Action Step development

12:00 – 13:00 Plenary session on Task 5: Action steps

13:00 – 14:00 LUNCH BREAK

14:00 – 15:00 Task 6: Group integration of solutions

15:00 – 16:30 Working groups complete Task 5

16:30 – 17:30 Final plenary session to present working group reports, discuss recommendations and integration, report completion

17:30 Workshop closure



Appendix III. Participant Hopes / Goals for Workshop

	I hope to accomplish	I wish to contribute
1.	A clearer idea of the threats facing cheetah as a species and what is being done and by whom. To give me a better of what role I can play in cheetah conservation. To meet people actively involved in cheetah conservation.	Facilitate communication between organisations. I am not sure what I can contribute to the workshop itself but hopefully because of it I can contribute towards conserving cheetah as a species.
2.	To know of activities and research programmes in the world and to learn from experiences in the world related to cheetah.	To share information on Asiatic cheetah status in Iran, to set up a workshop in Iran and to highlight the activities of government organisations and NGOs in Iran. To prepare books on cheetah.
3.	Workable solutions to cheetah problems.	Everything in my power to contribute.
4.	To gain knowledge, improved communication and cooperation between stakeholders with regards to management programmes of <i>in situ</i> and <i>ex situ</i> schemes. To understand more about the genetic and conservation status of cheetah and how management can enhance their status.	To assist in the development and implementation of strategies and other legislation (national) for cheetah conservation for South Africa.
5.	Meet other people involved with cheetah conservation. Get new ideas and input that would help improve my research.	Let delegates know about what I have done and give a little insight into the situation facing cheetah outside protected areas in South Africa.
6.	To develop and fine-tune the proposed cheetah management plan into workable action plans.	To share my expertise with other role-players and to learn from other experts.
7.	My main interest is especially in areas outside of Zimbabwe, types of cheetah-based conflict that exists in other areas and how they are currently handled.	Conflict resolution and problem cheetah data represented un databases as a form of feedback and management (and to baby-sit Aidan)
8.	Knowledge of the scope of work being done in the field of cheetah conservation worldwide and meeting people involved in the field.	Ideas and information regarding issues where I feel able to make a contribution.
9.	Broader understanding of the issues affecting cheetah reproduction and conservation.	Indirectly perhaps assist in bringing groups together and directly, by providing our own experiences in assisted reproduction in felids.
10.	Contribute the positive dialogue amongst cheetah stakeholders in the scientific management of populations as well as public awareness and the relationship between the science / education sector and the private / business sector.	Experience I helping to produce a product from the discussions including some specific action.
11.	Establish contact with other people active within the field of cheetah conservation.	Help to establish a forum for closer cooperation amongst different people and organisations involved in cheetah conservation work with the aim of optimising the use of data and funding available whilst reducing the stress on the animals induced by duplicated work.
12.	Increase knowledge, get an update of what is going on in the cheetah world and get to know who is who.	Any contribution which would help to contribute to the survival of cheetah in the wild.

13	A plan to define the role of the Cheetah Interest Group and action steps to implement the plan.	A commitment to play a role in accomplishing the action steps and continued participation in raising funds to support GCF related activities.
14	Continue the development of the Cheetah Interest Group and its communication network. Identify projects that the CIG feels are important and find support for them.	Communication, financial support, networking and expanding friendships
15	To follow up on what was outlined last year, in the individual working groups and especially as relates to the education committee.	To see how I can help to enable the CIG to operate as a self-sustaining entity
16	Get to a broader understanding of how cheetah and their habitats could be conserved and what we need to practice in order to keep Namibia a capital city for the cheetah world.	To share my understanding with the rest of the group.
17	Better understanding of projects impacting on wild cheetah and personal connections with the people doing these projects. Strengthen the links between <i>in situ</i> and <i>ex situ</i> cheetah research and see cool places like De Wildt and CCF!	Strengthen the link between the North America cheetah conservation community and African cheetah conservationists.
18	I hope to gain a better link between <i>in situ</i> and <i>ex situ</i> conservation of cheetah. I would like to better refine last year's list and include more projects. Also I would like to receive more hand rearing data of cheetah cubs for my global database.	I would like to share the activities of the "Linking <i>in situ</i> and <i>ex situ</i> Conservation Working Group" from 2001 – 2002 and continue finding funding for projects.
19	Make personal contacts and resource building. Gain more of a global understanding of research programmes ongoing and of the reproductive status of captive and wild caught cheetah worldwide.	As my field is reproductive biology, I hope to contribute input to research programmes in this area (also input into field research skills in this area.) Input into possible management strategies for the use of biomaterials.
20	To exchange ideas and experiences with other participants so that we can take the concepts from this meeting into the field, particularly outside protected areas.	To contribute field experience in Namibia with a view to developing practical solutions to conservation issues and making the CIG an action group.
21	Updates of the past year's progress on cheetah conservation globally, plans for the short and long-term future incorporating people's needs, plans to be perhaps less detailed in some but broader to look at joint big picture efforts in wild cheetah conservation, global cheetah breeding programmes and management linking <i>in situ</i> and <i>ex situ</i> .	Networking, hopefully good ideas and global thinking on a broad scale.
22	Update my understanding of worldwide cheetah conservation efforts and our role in furthering these.	A growing understanding of diseases in captive cheetah and the possible role of nutritional manipulation in their management.
23	Consolidation of the work begun last year and renewed commitment for future projects to protect cheetah and enlighten people about their value in the ecosystem.	Bring information on the wildlife situation in Zimbabwe and feedback on the environmental education set-up in that country.
24	Contacts, communication and muffins!	Whatever I can in my limited knowledge of captive breeding of cheetah.

25	Hope to continue learning about what is happening in the various countries that have cheetah. In South Africa we are at an important crossroad where our strategy with free-roaming cheetah, education philosophies and our captive breeding will determine the future of cheetah. I hope to gain insight in all areas.	I hope to contribute enthusiasm. My background is in education and marketing and so I hope to contribute ideas that will materialise into money and which will communicate our message to the world.
26	A plan for the future of cheetah.	30 Years of practical experience working with cheetah.
27	I would like to build up contacts with centres worldwide for future relocation of animals and to learn form everyone present.	Hopefully people will be aware of my centre and my work and set up exchange programmes.
28	To take the process of last year's workshop further. To implement some actions so that, as nice as it is to meet with you all, we don't have to hold a similar workshop next year.	Help to draw up and activate some relevant research projects.
29	Greater cooperation efforts for cheetah conservation.	What ever support both personally and as a representative of my institution to accomplish and promote cheetah conservation.
30	Updates on recently completed and started research projects, especially in the medical sphere. Seeing some of the outcomes of last year's workshop.	Feedback on tasks that were my responsibility or co-responsibility.
31	Experience from other range states and cheetah experts that I could use in the Kenyan situation. Establish contacts with the different experts present here. Next steps from the 2001 workshop.	The Kenyan experience in setting up the cheetah programme.
32	To get to know the people involved in cheetah conservation and to get to know their activities.	To give some input from our experience with other species in other areas facing similar problems, not to forget about work in Africa and to help with networking.
33	To make contact with people working in cheetah conservation and to draw on the wealth of knowledge and experience which exists here. Assimilate this to put forward the best action plan for Botswana, to meet people for potential funding contacts and to focus on conservation of cheetah outside protected areas.	To introduce the Botswanan perspective to the group.
34	Listen and learn about information and activities related to cheetah and know the status of cheetah in the world. Make contacts with the Cheetah Interest Group.	Report on all our activities at the workshop.

THE CONSERVATION BREEDING SPECIALIST GROUP (CBSG)

Web site at <http://www.cbsg.org>

There is a lack of generally accepted tools to evaluate and integrate the interaction of biological, physical, and social factors on the population dynamics of the broad range of threatened species. There is a need for tools and processes to characterise the risk of species and habitat extinction, to plot the possible effects of future events and the effects of management interventions and to develop and sustain learning-based cross-institutional management programmes.

The Conservation Breeding Specialist Group (CBSG) is a multinational conservation specialist group which has made its mark on the conservation of threatened flora and fauna worldwide. CBSG is one of the more than 120 Species Survival Commission Specialist Groups of the IUCN - World Conservation Union. CBSG has over 15 years' experience in developing, testing and applying scientifically-based tools and processes for risk assessment and species conservation decision-making. These tools, based on small population and conservation biology, human demography, and social learning dynamics, are used in intensive, problem-solving workshops to produce realistic and achievable recommendations for both *in situ* and *ex situ* population management. CBSG's mission is *"to conserve and establish populations of threatened species through conservation breeding programs and through intensive protection and management of these plant and animal populations in the wild."* CBSG tools include Conservation Assessment and Management Plans (CAMPs), Population and Habitat Viability Assessments (PHVAs), Conservation Masterplanning, Species Action Planning, Modelling exercises and a range of training and skills development workshops. CBSG's interactive and participatory workshop approach produces positive effects on management decision-making and in generating political and social support for conservation actions by local communities.

What does the Conservation Breeding Specialist Group do?

Wildlife and governmental officials invite the CBSG to help with their conservation efforts. CBSG uses numerous processes and tools it has developed to carry out its globally recognised programme.

Experience: The CBSG Programme Officers have conducted and facilitated more than 130 species and ecosystem workshops in 40 countries during the past 8 years. We have worked on a continuing basis with agencies on some taxa (e.g. Florida panther, Sumatran tiger) and have assisted in the development of national conservation strategies for other taxa (e.g., Sumatran elephant, Sumatran tiger, Indonesia). Population Biology Programme Officer (*Dr. P. Miller*) received his doctoral training with Dr. P. Hedrick and has experience with the genetic and demographic aspects of a range of vertebrate species. He has worked extensively with VORTEX® and other population models.

Scientific Studies of Workshop Process: The effectiveness of these workshops as tools for eliciting information, assisting the development of sustained networking among stakeholders, impact on attitudes of participants, and in achieving consensus on needed management actions and research has been extensively debated. We initiated a scientific study of the process and its long term aftermath three years ago in collaboration with an independent team of researchers (Vredenburg and Westley, 1995). A survey questionnaire is administered at the beginning and end of each workshop. They have also conducted extensive interviews with participants in workshops held in five countries. Manuscripts on CBSG Workshop processes and their effects are available from the CBSG office. The study also is undertaking follow up at one and two years after each workshop to

assess longer-term effects. To the best of our knowledge there is no comparable systematic scientific study of conservation and management processes.

CBSG Resources as Unique Asset

Expertise and Costs: The problems and threats to endangered species everywhere are complex and interactive with a need for information from diverse specialists. No agency or country encompasses all of the useful expert knowledge. Thus, there is a need to include a wide range of people as resources and analysts. It is important that the invited experts have reputations for expertise, objectivity, initial lack of local stake, and for active transfer of wanted skills. CBSG has a volunteer network of more than 700 experts with about 250 in the USA. More than 3,000 people from 400 organisations have assisted CBSG on projects and participated in workshops on a volunteer basis contributing tens of thousands of hours of time. We call upon individual experts to assist in all phases of projects.

Indirect cost contributions to support: Use of CBSG resources and the contribution of participating experts provide a matching contribution more than equalling the proposed budget request for projects.

Manuals and Reports: We have manuals available that provide guidance on the goals, objectives, and preparations needed for CBSG workshops. These help to reduce start-up time and costs and allow us to begin work on organising the project immediately with proposed participants and stockholders. We have a process manual for use by local organizers, which goes into detail on all aspects of organizing, conducting, and preparing reports from the workshops. Draft reports are prepared during the workshop so that there is agreement by participants on its content and recommendations. Reports are also prepared on the mini-workshops (working groups) that will be conducted in information gathering exercises with small groups of experts and stakeholders.



CONSERVATION BREEDING
SPECIALIST GROUP
SOUTH AFRICA



*AN ENDANGERED WILDLIFE TRUST PARTNERSHIP
SPECIES SURVIVAL COMMISSION, IUCN – WORLD CONSERVATION UNION*

The Endangered Wildlife Trust (EWT) is one of the largest non-governmental conservation organisations in Southern Africa and was established in 1973. Widely recognised by its prominent red cheetah spoor logo, the EWT conserves biodiversity through the hands-on conservation of species and their habitats, in a sustainable and responsible manner. Coordinating more than 90 field-based conservation projects and 19 working groups operating in Southern Africa, Endangered Wildlife Trust programmes cover a wide variety of species and eco-systems and play a pivotal role in the conservation of Southern African wildlife and the safeguarding of our natural resources.

The Conservation Breeding Specialist Group South Africa (CBSG South Africa) is one of the nine regional CBSG networks worldwide and the only CBSG network in Africa. CBSG South Africa is coordinated by the Endangered Wildlife Trust (EWT). CBSG South Africa was established in 2000 to bring to the Southern African conservation community the broad range of CBSG tools and processes for more effective biodiversity conservation and species management and has organised PHVAs, CAMPs, training workshops and Action Planning processes on a broad range of species and disciplines, working with almost 40 other conservation organisations in its first year..

CBSG regional networks have developed in regions requiring intensive conservation action in order to adapt CBSG tools and processes to the needs of regional stakeholder groups and species, utilise local expertise and develop a unique regional conservation identity. CBSG South Africa has already played a critical role in bridging the gaps between the different conservation communities in South Africa by introducing neutral, multi-disciplinary, multi-stakeholder processes and workshops which include all parties in the decisions, recommendations and resolutions taken pertaining to species conservation, management and problem solving. All information and resolutions generated through CBSG South Africa projects are “owned” by the participants and are further widely disseminated and distributed to stakeholders across all sectors.

The mission of CBSG South Africa is “*to catalyse conservation action in South Africa by assisting in the development of integrated and scientifically sound conservation programmes for species and ecosystems, building capacity in the local conservation community and incorporating practical and globally endorsed tools and processes into current and future conservation programmes in Southern Africa*”.

CBSG South Africa is based in Johannesburg and can be contacted at:
Tel / Fax: + 27 (0) 11 701 3811
E-mail: cbsgsa@wol.co.za
www.ewt.org.za/cbsg



Appendix VI.

CHEETAH INTEREST GROUP: RESOURCE QUESTIONNAIRE RESULTS

Country: Kenya

Organisations: Kenya Wildlife Services (KWS)

Active NGOs: Wildlife Clubs of Kenya, #20184 Nairobi, Fax 811906
 William Holden Wildlife Foundation, Email whwildlife@aol.com
 Elsamere Education Centre, Email elsafsc@africaonline.co.ke
 Giraffe Center, #15124 Nairobi, Tel 254-2-890-952, Fax 254-2-890973,
 Email: giraffe@insightkenya.com
 Lewa Downs Conservancy
 Gallman Foundation
 World Wide Fund Nature (Kenya)

Prevalent factors inhibiting EE in schools in Kenya:

Weak policy framework
 Lack of curriculum tools/learning materials
 Unskilled EE practitioners/teachers
 An ineffective curriculum

Resources not readily available in the school system in Kenya:

Pens		Paper	
EE lesson plans	1	EE lesson materials	1
Teacher resource guides	1	EE libraries for teachers	1
EE videos	1	Audio-visual equipment	1

Do teachers in Kenya have ready access to?:

	Computer	Email	Internet
All teachers			
Some teachers	1	1	1
No teachers			

Is English easily understood by Kenyan learners?:

	Yes	No
5-11 years		1
12 –18 years	1	

Languages in common use within Kenyan school system:

Swahili

Are most children in Kenya in a formal education system?:

Yes	No
1	

Country: Lesotho

Organisations: Gemini P.S., BBCDC, LHDA, FARM, National Curriculum Development Centre (Ministry of Education), GROW, Local government, Care International, Young Christian Students

Active NGOs: World Vision } EE incorporated in their activities
 Lesotho Red Cross }
 Africa 2000 (UN) }
 Gemini Winter and Summer Camps for Youth
 Masianokeng Environmental Centre, Masianokeng High School, PO Box 52, Mzenod 160
 Peace Corps, Christine Djondo – Country Director, PC Office Tel. 313-871
 Many NGOs have strong environment component – though unknown if any specifically cover EE
 Transformation Resource Centre
 Care International
 Lesotho Young Christian Students, PO Box 0510, Masery West 105, Lesotho
 Lesotho Youth Federation, Box 13810, Masery 100, Lesotho
 Students Representative Council (SRC), NTTC, Box 1393, Masery 100, Lesotho

Prevalent factors inhibiting EE in schools in Lesotho

- No policy
- No political will
- Lack of information on EE issues (4)
- Lack of resources
- Lack of knowledge/expertise (3)
- Lack of funding (free handouts not sustainable) (2)
- Teachers have students memorize only for exams
- Not taught yet/not in curriculum at national level (2)

Resources not readily available in the school system in Lesotho:

Pens	5	Paper	5
EE lesson plans	8	EE lesson materials	9
Teacher resource guides	8	EE libraries for teachers	6
EE videos	9	Audio-visual equipment	7

Do teachers in Lesotho have ready access to?:

	Computer	Email	Internet
All teachers	1	2	1
Some teachers	4	2	2
No teachers	5	7	8

Is English easily understood by Lesotho learners?:

	Yes	No
5-11 years	6	3

12 –18 years

8

2

Languages in common use within Lesotho school system:

English, Sesotho

Are most children in Lesotho in a formal education system?:

Yes

No

9

1

Country: South Africa

Organisations: University of Natal, Mondi Wetlands Project, DACEL, Natal Museum, DEA&T, KZN Crane Foundation

Active NGOs: Wildlife Environment Society of South Africa (WESSA)
DEITA
KZN Wildlife
GREEN (Greater Edendale Environmental Network)
KPCA (Keep Pietermaritzburg Clean Association)
Natal Museum
Environmental Network Forum
Qwa Qwa Environment Movement
KZN Crane Foundation
Trees for Africa
Mondi Wetlands Project
Endangered Wildlife Trust

Prevalent factors inhibiting EE in schools in South Africa:

Teachers' lack of support, information, interest (3)
Relevant Department (Education)
Lack of training (3)
Lack of resources (2)
Links with all organisations doing EE to avoid duplication
Indigenous knowledge

Resources not readily available in the school system in South Africa:

Pens	1	Paper	1
EE lesson plans	3	EE lesson materials	2
Teacher resource guides	2	EE libraries for teachers	5
EE videos	4	Audio-visual equipment	3

Do teachers in South Africa have ready access to?:

	Computer	Email	Internet
All teachers			
Some teachers	5	5	4
No teachers	1	1	1

Is English easily understood by South African learners?:

	Yes	No
5-11 years	1	4
12 –18 years	5	

Languages in common use within South African school system:

English, S-Sotho, Zulu

Are most children in South Africa in a formal education system?:

Yes	No
6	

Country: Botswana

Organisations: Ministry of Education, Chobe Wildlife Trust, Mokolodi

Active NGOs: Botswana National Conservation Society
Mokolodi Orphanage, Mokolodi Nature Reserve
Kalahari Conservation Society
Conservation International
Somanelang Tikologo
Junior Achievement
Department of Wildlife

Prevalent factors inhibiting EE in schools in Botswana:

Lack of resources

Resources not readily available in the school system in Botswana:

Pens		Paper	
EE lesson plans	1	EE lesson materials	1
Teacher resource guides		EE libraries for teachers	2
EE videos	1	Audio-visual equipment	2

Do teachers in Botswana have ready access to?:

	Computer	Email	Internet
All teachers			
Some teachers	3	1	2
No teachers		1	

Is English easily understood by Botswana learners?:

	Yes	No
5-11 years	2	
12 –18 years	3	

Languages in common use within Botswanan school system:

Setswana

Are most children in Botswana in a formal education system?:

Yes	No
3	

Country: Zambia

Organisations: Ministry of Education – VVOB

Active NGOs: WWF - ZEEP
 VVOB – Ministry of Education (Teacher Educ Dept, CDC, ZATEC)
 WESCZ (Wildlife & Environmental Conservation Society of Zambia)
 ZOS (Zambian Ornithological Society)
 ECC – Environmental Council of Zambia

Prevalent factors inhibiting EE in schools in Zambia

Money
 Capacity (skill, knowledge)
 New concept

Resources not readily available in the school system in Zambia:

Pens	1	Paper	
EE lesson plans	1	EE lesson materials	1
Teacher resource guides	1	EE libraries for teachers	1
EE videos	1	Audio-visual equipment	1

Do teachers in Zambia have ready access to?:

	Computer	Email	Internet
All teachers			
Some teachers			
No teachers	1	1	1

Is English easily understood by Zambian learners?:

	Yes	No
5-11 years		1
12 –18 years	1	

Languages in common use within Zambian school system:

Tonga, Loozi, Nyanja, Bemba, Lunda

Are most children in Zambia in a formal education system?:

Yes	No	(Some)
1	1	

Country: Zimbabwe

Organisations: ACTION

Active NGOs: SCOPE – Mr Walter Nyika, Email: scope@africaonline.co.zw
 WEZ – The Director, Email: zimwild@ecoweb.co.zw
 E2000 – Innocent Hodzonge, Email: e2000@mweb.co.zw
 BEST, Email gtzbest@mweb.co.zw
 National Botanic Gardens – Soul Shava, Email: srgh@mweb.co.zw

Prevalent factors inhibiting EE in schools in Zimbabwe:

Zimbabwe is developing an EE policy at the moment and the draft will be out before end of year – this will have comprehensive information about EE situation in Zimbabwe (recommends obtain copy)

Resources not readily available in the school system in Zimbabwe:

Pens	1	Paper	1
EE lesson plans	1	EE lesson materials	1
Teacher resource guides	1	EE libraries for teachers	1
EE videos	1	Audio-visual equipment	1

Do teachers in Zimbabwe have ready access to?:

	Computer	Email	Internet
All teachers	1	1	1
Some teachers			
No teachers			

Is English easily understood by Zimbabwe learners?:

	Yes	No
5-11 years	1	
12 –18 years	1	

Languages in common use within Zimbabwe school system:

Are most children in Zimbabwe in a formal education system?:

Yes	No
1	

Country: Namibia
Organisations: CCF, AfriCat Foundation
Active NGOs: CCF
 AfriCat (Environmental Education Programme)
 Danish orgs in north of country
 (Contact details from NEEN members – ask for a directory)
 NARREC – Liz Komen
 Ugub Wilderness School
 IRDNC

Prevalent factors inhibiting EE in schools in Namibia:

The system paradigm
 Not viewed as a priority (many other topics still far from being addressed)
 Lack of interest in teaching/administrating
 Common belief – “It is a job, not a responsibility of teaching Namibian youth”

Resources not readily available in the school system in Namibia:

Pens		Paper	
EE lesson plans	2	EE lesson materials	2
Teacher resource guides	1	EE libraries for teachers	2
EE videos	2	Audio-visual equipment	2

Do teachers in Namibia have ready access to?:

	Computer	Email	Internet
All teachers			
Some teachers	2	2	2
No teachers			

Is English easily understood by Namibian learners?:

	Yes	No
5-11 years	2	
12 –18 years	2	

(but not easily understood)

Languages in common use within Namibian school system:

Mother tongue for first 2 years with English as a subject/mother tongue in rural areas – in lots of schools English is only implemented past grade 3.

Are most children in Namibia in a formal education system?:

Yes	No
2	

Country: Swaziland
Organisations: SEJA
Active NGOs: Tonge Nawe (Save Nature)

Prevalent factors inhibiting EE in schools in Swaziland:

No time slot in timetable
 Lack of material
 Teachers not informed
 Pupils not motivated to learn about things they are not examined on

Resources not readily available in the school system in Swaziland:

Pens		Paper	
EE lesson plans	1	EE lesson materials	1
Teacher resource guides	1	EE libraries for teachers	1
EE videos	1	Audio-visual equipment	1

Do teachers in Swaziland have ready access to?:

	Computer	Email	Internet
All teachers	1		
Some teachers			
No teachers			

Is English easily understood by Swaziland learners?:

	Yes	No
5-11 years	1	
12 –18 years	1	

Languages in common use within Swaziland school system:

English

Are most children in Swaziland in a formal education system?:

Yes	No
1	

Country: Tanzania
Organisations: Institute of Education
Active NGOs: AGENDA, c/o Box 32645 Dar, Tanzania
 ENVITECK, c/o Bakobi, MR
 DONET, Dodoma Region

Prevalent factors inhibiting EE in schools in Tanzania:

Lack of relevant EE resources
 Lack of national policy

Resources not readily available in the school system in Tanzania:

Pens		Paper	
EE lesson plans	1	EE lesson materials	1
Teacher resource guides	1	EE libraries for teachers	1
EE videos	1	Audio-visual equipment	1

Do teachers in Tanzania have ready access to?:

	Computer	Email	Internet
All teachers			
Some teachers	1	1	1
No teachers			

Is English easily understood by Tanzanian learners?:

	Yes	No
5-11 years		1
12 –18 years		1

Languages in common use within Tanzanian school system:

Kiswahili

Are most children in Tanzania in a formal education system?:

Yes	No
1	

WEB SITE DEVELOPMENT: SURVEY RESULTS

To CIG Participants

Below you will find the responses from the 18 individuals participating in the Web Development Survey I distributed in October 2001. I have entered the responses of each participant as those appear on their individual response sheets and coded those responses numerically 1 through 18, to keep identities private. The original questions are in **bold**. So, for example, if you wanted to see what respondent #8 had to say about the development of the CIG web product, simply locate the #8 response within each question.

And, to see what the group felt about each question, look for the answers within each question.

Originally, 42 surveys were mailed. Eighteen (18) were completed and returned, giving us a 42.8% response rate.

At the end of each question/answer section, I have provided my analysis, interpretation, conclusion or biased opinion based on the facts at hand or a wild guess. Slight editing liberties were taken from time to time to create a standard response look, to hide individual identities, and to keep responses focused on the questions asked. However, the essence of the responses has not been altered.

Should questions arise, please do not hesitate to write. We will begin working on the site shortly.

Regards,



STEVE HINES

SHOULD THE SITE PROVIDE BOTH INFORMATION FOR INTERESTED PARTIES NOT DIRECTLY INVOLVED IN CIG AND SERVE AS A MEANS FOR THOSE WORKING WITH CHEETAH TO EXCHANGE INFORMATION?

Response A...Do Both:

Response B...Serve CIG issues only

(1) Do Both

(2) Do Both

(3) Do Both

(4) Do Both

(5) Do Both: Do both as this will serve to educate and inform the broader public about cheetah and the work of all the CIG members, as well as provide a lot more exposure for the sponsors of the CIG as well as its member organizations. Public awareness and education is a vital part of the conservation process and letting people know about our work is essential. There can be pages on the web site which are exclusive to members, say dealing with research, project management, advice for project leaders, communications between project managers etc. but the whole site as a general rule should be accessible to the public.

(6) Do Both

(7) Both

(8) Do Both- But, I suggest you try to meet the needs of 'B' first, then sequentially try to meet the needs of the parties not directly involved in the CIG.

(9) Do Both

(10) Do Both

(11) Do Both

(12) Do Both- We could have a password protected area for CIG specialists on an invitation-only discussion group. And general info for others- latter would be very useful to refer the constant stream of enquiries from the general public to.

(13) Only serve as a CIG Information Exchange.

(14) It should do both.

(15) Initially I would go for an exclusive site.

(16) Both perhaps have certain areas only available exclusively for those working in cheetah conservation.

(17) Do Both- Yes. A larger audience broadens the base of support and potential funding for cheetah projects.

(18) Do Both.

Analysis: The majority (16) recommends the site provide both information for interested parties (the general public, potential donors, corporate and foundation contacts, etc.), as well as serve as a means for those working with the cheetah to exchange information and further their work. Several respondents suggest that initially the site serve the CIG group exclusively.

It will be our intention to incorporate both capabilities in the initial development of the site.

In addition, as you have seen, participants included additional useful information in their responses, some of which is addressed later in the survey.

WHAT BROAD SECTIONS WOULD YOU LIKE TO SEE REPRESENTED? FOR EXAMPLE, SHOULD WE USE THE CORE ELEMENTS DEVELOPED IN SOUTH AFRICA—CENSUS, HEALTH, EDUCATION AND COMMUNICATION, ETC.—AS THE BASIC SECTIONS?

(1) I think the site should have a section on the needs of in-situ efforts. Other sections from the South Africa meeting should be covered as well.

(2) No response

(3) The core elements developed in South Africa.

(4) Use the core elements developed in South Africa.

(5) We should use the groups established at the workshop as a basis but expand on them a lot, taking into account my response to question 1. We will therefore need sections dealing with a general overview of what the status of cheetah worldwide is, what countries have cheetah and who is doing what with them, what the issues are etc. i.e. general education and information on cheetah. Then we need to have more detail on the CIG members themselves and access to their own sites through hyperlinks if possible. Perhaps even a bit of an eco-tourism section, where people can visit cheetah projects including the zoos and breeding centres (like De Wildt and CCF), as people may be inspired to visit a cheetah centre after seeing the site. This will imply that this site can become a single entry portal into cheetah research and conservation worldwide, which can exponentially increase the exposure for, and hits onto the site. Perhaps sections aimed at specific sectors of the public as well, like info for scholars and kids, will be useful. The education group can assist in the development of this aspect. The more broad-based the site is, the more exposure it will get and the more sponsors will be happy to remain sponsoring it.

(6) I guess the above guidelines are OK. Surely one can add later.

(7) Yes, for core elements.

(8) I think that the areas identified at the workshop are a good place to start for the beginning. Other areas can be added later?

(9) This seems a good first cut. I can't think of anything to add immediately.

(10) I suppose start with the core sections and then expand.

(11) Use the core sections as developed in South Africa.

(12) All issues are valid but I think the main backbone should be in-situ conservation.

(13) Would like to see the core elements used in South Africa, namely Census, Health, Education & Communication.

(14) No response.

(15) Work on the outcome of the workshop but this will evolve naturally to a greater overlap. The opportunity for field workers (and to some degree zoo workers) to post data and information will be important.

(16) It is good to have broad sections such as Census, health etc., which can then have more specific sub sections. This will make navigation far easier.

(17) Start with the core elements developed at the Cheetah meeting in SA and add new sections if needed in the future.

(18) As in South Africa

Analysis: The majority believes we should begin by including the core sections, which were identified during the workshop in South Africa. Two individuals specifically requested a section on in-situ efforts or conservation. I believe we can accomplish their wish as we develop the site.

The discussion topics identified in South Africa were: (1) Census, (2) Health, (3) Management of Cheetah Outside of Protected Areas, (4) Coordinating and Collecting *In Situ* and *Ex Situ* Information, (5) Education and Communication and (6) the Viability of the *Ex Situ* Population.

In the future, should the CIG participants wish to add additional sections or create subsections, based on need or demand, the site will be developed to allow for this. For example, several members of the Education and Communication Working Group have expressed interest in creating a special section "Education" designed for educators, schools systems and students to allow access for special materials, lesson plans, curricula, etc.

THE ABILITY OF THE VARIOUS PARTIES TO COMMUNICATE THROUGH THE WEB SITE WAS MENTIONED AT THE WORKSHOP AS AN IMPORTANT COMPONENT. THERE ARE GENERALLY TWO METHODS TO ACCOMPLISH THIS...1) DISCUSSION FORUM (MESSAGE BOARD) AND, 2) CHAT ROOM.

Please indicate which you would prefer and **why**.

(1) I would find the message board format better for my use.

(2) The message board is easier and less costly in log on time for people who do not have access to internet/email full time e.g. field workers in range states.

(3) Not sure of the difference.

(4) Discussion Forum (message board) will be more practical.

(5) I think both could work but I personally would use a discussion forum / list serve as people from around the world will log onto chat rooms at different hours and may miss each other. Furthermore, the more remote people in Africa and the East may not be able to use this effectively with poor communication links, expensive link-ups and costly calls etc. I like being able to post a question or reply and to have time to consider it and have a number of people respond to it, which does not

happen in a chat room, as people who are not logged in are not part of the communication process and I do not have time to stay logged in - especially when travelling as we all do!

(6) The discussion forum seems more practical to me – that is if my understanding of the 2 options is correct. International time zones will make actual discussions difficult.

(7) Don't care.

(8) I think we need to figure out how to limit discussions to professionals, somehow. I'm not sure how this might be accomplished...but the last thing people will want is having kids in the forums or chat rooms who are trying to get info for a term paper, for example.

(9) Message Board (discussion forum)- Because I don't have to remember to go look at something that I will procrastinate about anyway.

(10) I really don't understand the difference.

(11) Discussion forum (message board)- This allows you to reply at leisure and time zones and differences will be such a problem.

(12) Discussion forum (email based)- More people have experience with this medium and does not require the 'effort' of logging on to find out what's going on.

(13) I've not been exposed to a "Chat Room" previously; so don't know how this is different.

(14) I haven't really made use of either – we can't get the Internet here – is there any way either of these can be used in an email form?

(15) Discussion forum- As I understand it this is a more formal presentation, which may be easier for people to work with initially.

(16) Both are very useful tools. The chat room will be of great help to improve communication among people from all four corners of the earth. Scheduled talks with experts on specific issues can also be arranged. The discussion forum will enable others to gain information and disperse information in an easy manner. Can be used as a reference area for interested parties.

(17) Either format is okay with me.

(18) Will go along with the majority opinion!

Analysis: A clear majority (9) indicated their preference for the Message Board/Discussion Forum. Several respondents did not express an opinion and a number of folks were confused by the two terms.

In a general sense, the Message Board is the most practical tool for the CIG. Several of the respondents identified the primary advantage to the Message Board for our type of group and that is our lack of easy access to each other is not a major issue. As a group, we are faced with worldwide separation, vast differences in time zones and a variety of levels of access to Internet service.

The Message Board allows each individual to access the web site when it is convenient for that individual. Once there, they may post a question or respond to a question currently under discussion. The Chat Room is a 'live' tool, best utilized when folks are separated by only three or four time zones.

Two respondents requested something based on e-mail because of no access to the Internet. We will address that during development of the site. The answer may be to have the site administrator or web master copy the current discussion on the Message Board and send that as an e-mail for those folks.

Having a 'login' will limit unwelcome visitors.

SHOULD THE SITE CONTAIN A "LOGIN" REQUIREMENT TO GAIN ACCESS TO SPECIFIC SECTIONS, FUNCTIONS OR INFORMATION?

(1) This is a tough one. Yes, it should require a login due to the need for open communication especially between field and captive groups.

(2) NO- Best to keep things open and uncomplicated.

(3) Yes- For confidentiality when working on specific projects.

(4) Yes- Some info or discussions can be very sensitive and could create the wrong impressions from people who do not know the entire background (e.g. Problem animal control etc.)

(5) Yes- For the areas, which we do not want to be open to the public. This is essential as the CIG members need areas where they can compare notes about confidential stuff like project management, research, political trouble, finances, project failure and success etc. This should be an area where the members can continue with the discussions already started at the workshop and should feel as free and open about communicating as they were then, so a private, password accessed area is critical.

(6) No- Anything that makes it more difficult to access the site may distract "visitors."

(7) Yes

(8) Yes- For the reason I mentioned above. We want to be inclusive and transparent, yet there are some functions, like chat rooms where we want to keep it at a certain professional level, I think.

(9) NO- We want to communicate. Let's not set up more barriers to this. Is anything we're doing that sensitive?

(10) I don't know enough about this, but I don't want to be too restrictive at the beginning.

(11) Yes- This would limit certain sections of information to genuinely interested parties.

(12) Yes- Refer to Question #1, if the web site is aimed at a general audience to.

(13) I don't have Internet access on this computer (private), only e-mail. Am waiting for my employer to supply me with both e-mail and Internet on an official computer.

(14) Yes- There may be some sensitive issues that require a more confidential forum.

(15) Yes- To give users confidence to post important information or to discuss more controversial topics without the worry that outsiders could access it.

(16) Yes- With building an online cheetah community it is important that information be gathered about the community out there. With registering for a "login", information that would assist the web site can be obtained from the user. One can also monitor the usage of the user out there, seeing what they like and what they need. There need not be a cost involved upon registration. Upon registration a person can also indicate if they would like to receive a newsletter via e-mail keeping them updated with new developments in the conservation of cheetah.

(17) I'm not sure what the advantages or disadvantages are with a login requirement.

(18) Yes to login, as it's a useful screen.

Analysis: A majority (12) of the respondents believe we should have a login requirement. Because we are planning a site which serves two audiences, I believe a login will allow the CIG audience to conduct business without fear of unwelcome visitors, prying eyes and, unnecessary and time-wasting comments.

For example, I think it will be useful for CIG members to know that the Message Board section and the section for downloading reports, studies and research are only accessible to those individuals with the CIG login.

SHOULD THE SITE ALLOW FOR FILES TO BE UPLOADED AND DOWNLOADED AS A WAY TO CIRCULATE DOCUMENTS FOR DEVELOPMENT AND REVIEW?

(1) Yes- This could be a good way to share or circulate proposals ideas or other information.

(2) Yes- 1) articles/journals are often difficult/expensive to a) get, b) subscribe to and 2) free flow of information is critical to progress.

(3) Yes- I would think that there would be proposals sent back and forth.

(4) Yes- A very good way to get comments on documents from major role planers and experts.

(5) Yes- To keep communication open, effective and interactive, just like the workshop initiated. We want the workshop process to be kept alive through this site and so all information should be treated as part of the process of review, discussion and collaboration.

(6) Yes- ease of communication. Should there be confidential docs, we could still send them directly to involved parties.

(7) Yes

(8) Yes- But this would be best if some type of password system were established, and if changes in documents can somehow be tracked. Is there a way to offer people access for developing and reviewing documents but tracking the changes as they are submitted?

(9) Absolutely. It's quick, easy, and right now I seem to be missing a fair bit of land-mailed stuff that was mailed to me but is probably quarantined somewhere in the Northeast US.

(10) Yes

- (11) Yes- This is a very easy way to disseminate information.
- (12) Yes- Email discussion group can achieve this also, of course.
- (13) Yes- Because it appears to make the work easier.
- (14) Yes- Seems a great idea.
- (15) Yes- For ease and to avoid repetition.
- (16) Yes- If you have the technology why not use it. This is an extremely useful tool with regards to education and school curricula.
- (17) Yes- To circulate documents for development and review.
- (18) Yes- As is it not the point of the exercise, to get/receive information, etc?

Analysis: There is total support for this feature on the web site.

SHOULD THE SITE CONTAIN AN EMAIL LIST FUNCTION, WITH OPTIONS FOR SIGNUP AND UNSUBSCRIBE TO A MASTER LIST AND/OR LISTS WHICH CORRESPOND TO THE BASIC SECTION AREAS?

- (1) Yes- Give a way to either be in or out.
- (2) Yes- Allow ready access to specialist areas under the core headings.
- (3) I'm not sure.
- (4) Yes- This will allow for specialized info access. Not everybody is interested in all aspects.
- (5) Yes- For similar reason to the above answer - to keep communication alive and open, to generate discussion and to allow for increased interaction between members and the public and to inform people of each other's existence and work in the field of cheetah conservation.
- (6) Yes- Automatically be updated – prevents “members” slipping off.”
- (7) Yes
- (8) Yes- This would be extremely helpful for disciplinary groups.
- (9) If you could do that, it would be great. I manage a few list serves, and trying to get people to remember to tell me that their email addresses changes if impossible. If THEY were responsible, it would be Good.
- (10) Yes
- (11) Yes- Again, this is an easy way to keep all parties in contact. Someone has to administer the list though.

(12) Possibly, but I suspect it would be more productive to establish an all-in-one list and then decide as it evolves whether it should be broken into sub-units.

(13) Yes- So that participants have the option to participate or not to participate, without feeling coerced.

(14) Yes- This is particularly important for people in areas with bad phone connections, where web access is impossible.

(15) No- There are not so many of us and most will want to see everything anyway.

(16) Yes- This will assist the better flow of information among interested parties.

(17) Yes- This seems to work well for other communities or list serves I receive information from. Someone with a specific interest may choose not to be on the master list.

(18) Yes to email list function; once again, for the sharing of information.

Analysis: There is almost total agreement that this is an important function to include.

HAVE I MISSED SOMETHING IMPORTANT?

(4) What about a general discussion message board for the general public? And links to member's web sites?

(6) Maybe some access to a central donation fund should someone want to make a contribution to the global project?

COMMENTS FOR THE GOOD OF THE GROUP?

(1) Communication between interested parties seems to be the key in helping conservation efforts. That was an obvious outcome of the meeting. The web site will be a valuable tool for all of us.

(10) The most important thing in my view is to start out providing a forum which is very accessible to anyone for all issues concerning the cheetah. We shouldn't be too restrictive, especially as we are trying to get to know how we work as a group.