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Iain Douglas-Hamilton

IUCN/WWF Elephant Survey and Conservation Programme

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Cover Page Footnote
This action plan for the African elephant is, in every sense, a group effort. From the smallest scraps of information on isolated remnant elephants, to the questionnaire replies for whole countries, we have relied on hundreds of informants from all corners of Africa where the elephant still ranges. We are deeply indebted for their time and interest. I am also grateful to the volunteers who made up our aerial survey teams for elephant populations of special interest. For the first time in history, the distribution and abundance of the African Elephant has been assembled from the best available contemporary information. Special mention should be made of the role of Harvey Croze, Co-chairman of the IUCN/African Elephant Specialist Group, who conceived the idea of a pan-African Elephant Survey in 1969 and helped guide this survey in achieving its goal. The IUCN Elephant Group reviewed the first draft of this action plan and members were helpful with suggestions. In particular, I should like to thank Kes Hillman who deputized for me when I was away in the field, Karen Ross who sorted and sifted information and assembled country resumes, Doris Gathenyah and Robert Ngigi who coped with secretarial and office chores, and Carol Zito who drafted the final maps. Ian Parker provided indispensible insights into the ivory trade, including a four volume report and numerous stimulating ideas on man/elephant relationships. My special thanks go to Sara Cameron for her contribution to the programme, and especially for editing and drafting much of this document. Finally, I give my thanks to my wife Oria, who has been with me on every stage of the elephant programme from beginning to end, for her inspiration and ideas. Although I accept responsibility for the recommendations, it is to the contributors that credit should go for the information contained in this African Elephant Action Plan.
Editor's note: The following two are excerpts from reports by Iain Douglas-Hamilton completed in December and August 1979, respectively. They were sent to us by Robert F. Scott, Executive Officer, Survival Service Commission, IUCN, on February 13, 1980. In a subsequent letter, Scott has written: "... these are reports to IUCN and reflect the thoughts of the author, they are not at this stage necessarily reflecting the views of the IUCN." Meetings of the African Elephant Specialist Group and the IUCN/Survival Service Commission were held in Kenya, April-May this year, to discuss related matters. Proceedings of this meeting are included in this issue (pp. 100-133). Additional information pertinent to the ivory trade is included in "Ban-the-Ivory Campaign II", pages 134-157.

IUCN/WWF/NYZZS ELEPHANT SURVEY AND CONSERVATION PROGRAMME:
THE AFRICAN ELEPHANT ACTION PLAN (EXCERPTS)*
by Iain Douglas-Hamilton

In 1976, the IUCN initiated a three-year project to investigate the status and distribution of the African Elephant, with the aim of drawing up a comprehensive programme for its conservation. Funds were provided by the World Wildlife Fund and the New York Zoological Society. Data was also drawn from a parallel study of the international ivory trade, funded by the United States Fish and Wildlife Service.


ACKNOWLEDGEMENTS

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I. HOW MANY ELEPHANTS?

The African elephant through its adaptability and intelligence still survives in 35 countries in Africa south of the Sahara, and ranges over some 7 million square kilometres, although often at vanishingly small densities. During the period of our survey, between 1976 and 1979, we believe that there were a minimum of 1.3 million elephants on the continent.

However, numbers in themselves are no safeguard. Elephants seem to be declining in more than three-quarters of the countries where they are found. An unprecedented leap in the price of ivory in the early seventies triggered probably the largest wave of elephant killing in this century. It appears to have caused major declines in elephant numbers in Angola, Cameroon, Central African Republic, Congo, Kenya, Namibia, Sudan, Uganda, Zaire and Zambia.

Where communications are well developed and there has been a breakdown in law enforcement the declines have been spectacular, as in Kabalega Park, Uganda, south of the Nile, where elephants were reduced from 8,000 to less that 2,000 in a few years. Kenya is estimated to have lost over half its elephants in the space of seven years.
Despite these declines, the elephants' range covers approximately 90 parks, reserves, or otherwise nominally "protected" areas. Both the range and the "protected" areas are marked on the maps which follow.

II. PROBLEMS OF ELEPHANT CONSERVATION

Elephants compete with man for space. As man is expanding in population and in his use of land, every year there is less range for the elephants. The protected areas cover some 20% of the elephants' range, but in the long run the most serious threat to the elephants will be competing with human demands. Conflicting human interests may be expected to exert pressure even on the parks.

The other side of the coin is that elephants, harassed by crop defenders or shot at by ivory hunters tend to take refuge in the Parks where they may for a while be better protected. Artificially compressed they tend to start destroying trees faster than they can regenerate. This problem has in the past been tackled either by shooting what were judged to be surplus elephants, or by "letting nature take its course"—which has in some cases resulted in starvation of thousands of elephants. The correct action depends upon the aesthetic and philosophical point of view of the park managers.

Nowadays the problem of "too many elephants" within a National Park is very infrequent. In countries like South Africa and Zimbabwe their numbers are regulated by shooting, but in most of East Africa poachers have in effect carried out the culling, and poaching has overtaken localized "over-crowding" as the most serious problem.

All the traditional elephant hunting techniques are employed, like ring burning, pitfalls, and poisoned arrows shot from muzzle loaders, but now more conventional firearms and frequently automatic weapons are also used to kill elephants. We have heard allegations of mass poisoning of waterholes and the setting of poison fruit along elephant trails. The poisons specifically mentioned have been battery acid and aldrine, the insecticide. These accounts have such wide currency that there must be some basis of truth to them.

Where poaching for ivory is the most immediate threat to the larger elephant populations of East and Central Africa, the elephants of west Africa are more often poached for their meat. Reports have been received of poached elephants stripped of meat, but with the tusks left intact.

The future of wildlife depends upon the National Parks system, but when animals are concentrated within well run parks where good roads have been developed for tourists, they become extremely vulnerable to political upheaval and war. Unfortunately, Africa is a continent in turmoil, and all too often we have received reports of soldiers killing elephants for ivory, meat, or simply trigger-happy fun. The Uganda example where Amin's troops and the Tanzanian liberators both killed elephants to excess has been replicated in Zaire, Congo, Chad and by South African troops in Namibia.

Wars may to some extent benefit elephants when tracts of land become temporarily abandoned by refugees, as may have happened during the Sudan civil
V. IUCN/WWF/NYZS Elephant Range Map

AFRICA - 1979

Key:
- Known Elephant Distribution

0 250 500 1000 km
### VI. Table 1: African Elephant Population Table

<table>
<thead>
<tr>
<th>Country</th>
<th>Number of Elephants</th>
<th>Size of Ele/Range</th>
<th>Range as % of Country</th>
<th>% Range &quot;Protected&quot;</th>
<th>% Number &quot;Protected&quot;</th>
<th>Ave. Density Ele/km²</th>
</tr>
</thead>
<tbody>
<tr>
<td>Angola</td>
<td>12,400</td>
<td>350,800</td>
<td>29%</td>
<td>40%</td>
<td>Unknown</td>
<td>0.04</td>
</tr>
<tr>
<td>Benin</td>
<td>900</td>
<td>14,199</td>
<td>12%</td>
<td>55%</td>
<td>70%</td>
<td>0.06</td>
</tr>
<tr>
<td>Botswana</td>
<td>20,000</td>
<td>146,414</td>
<td>24%</td>
<td>11%</td>
<td>28%</td>
<td>0.14</td>
</tr>
<tr>
<td>Cameroon</td>
<td>16,200</td>
<td>261,493</td>
<td>55%</td>
<td>10%</td>
<td>Unknown</td>
<td>0.06</td>
</tr>
<tr>
<td>C.A.R.</td>
<td>63,000</td>
<td>360,800</td>
<td>58%</td>
<td>12%</td>
<td>Unknown</td>
<td>0.20</td>
</tr>
<tr>
<td>Chad</td>
<td>15,000</td>
<td>461,600</td>
<td>35%</td>
<td>28%</td>
<td>Unknown</td>
<td>0.03</td>
</tr>
<tr>
<td>Congo</td>
<td>10,800</td>
<td>170,400</td>
<td>50%</td>
<td>1%</td>
<td>12%</td>
<td>0.06</td>
</tr>
<tr>
<td>Equat. Guinea</td>
<td>1,300</td>
<td>20,000</td>
<td>77%</td>
<td>Unknown</td>
<td>Unknown</td>
<td>0.07</td>
</tr>
<tr>
<td>*Ethiopia</td>
<td>900</td>
<td>81,289</td>
<td>7%</td>
<td>9%</td>
<td>21%</td>
<td>0.01</td>
</tr>
<tr>
<td>Gabon</td>
<td>13,400</td>
<td>266,979</td>
<td>99%</td>
<td>22%</td>
<td>Unknown</td>
<td>0.05</td>
</tr>
<tr>
<td>Ghana</td>
<td>3,500</td>
<td>16,744</td>
<td>7%</td>
<td>49%</td>
<td>Unknown</td>
<td>0.21</td>
</tr>
<tr>
<td>Guinea</td>
<td>300</td>
<td>12,292</td>
<td>5%</td>
<td>0%</td>
<td>0%</td>
<td>0.02</td>
</tr>
<tr>
<td>*Ivory Coast</td>
<td>4,000</td>
<td>67,593</td>
<td>21%</td>
<td>25%</td>
<td>23%</td>
<td>0.06</td>
</tr>
<tr>
<td>*Kenya</td>
<td>65,000</td>
<td>300,182</td>
<td>52%</td>
<td>10%</td>
<td>17%</td>
<td>0.02</td>
</tr>
<tr>
<td>*Liberia</td>
<td>900</td>
<td>21,370</td>
<td>19%</td>
<td>0%</td>
<td>0%</td>
<td>0.04</td>
</tr>
<tr>
<td>Malawi</td>
<td>4,500</td>
<td>10,400</td>
<td>11%</td>
<td>99%</td>
<td>99%</td>
<td>0.43</td>
</tr>
<tr>
<td>Mali</td>
<td>1,000</td>
<td>65,558</td>
<td>5%</td>
<td>48%</td>
<td>60%</td>
<td>0.02</td>
</tr>
<tr>
<td>Mauritania</td>
<td>160</td>
<td>14,500</td>
<td>1%</td>
<td>0%</td>
<td>0%</td>
<td>0.01</td>
</tr>
<tr>
<td>Mozambique</td>
<td>54,800</td>
<td>304,197</td>
<td>39%</td>
<td>Unknown</td>
<td>Unknown</td>
<td>0.18</td>
</tr>
<tr>
<td>Namibia</td>
<td>2,700</td>
<td>186,288</td>
<td>23%</td>
<td>12%</td>
<td>39%</td>
<td>0.01</td>
</tr>
<tr>
<td>*Niger</td>
<td>1,500</td>
<td>11,262</td>
<td>1%</td>
<td>20%</td>
<td>46%</td>
<td>0.13</td>
</tr>
<tr>
<td>*Nigeria</td>
<td>2,300</td>
<td>17,844</td>
<td>2%</td>
<td>Unknown</td>
<td>66%</td>
<td>0.13</td>
</tr>
<tr>
<td>*Rwanda</td>
<td>150</td>
<td>1,900</td>
<td>7%</td>
<td>16%</td>
<td>Unknown</td>
<td>0.08</td>
</tr>
<tr>
<td>*Senegal</td>
<td>450</td>
<td>18,000</td>
<td>9%</td>
<td>50%</td>
<td>78%</td>
<td>0.01</td>
</tr>
<tr>
<td>*Sierra Leone</td>
<td>300</td>
<td>7,000</td>
<td>10%</td>
<td>Unknown</td>
<td>Unknown</td>
<td>0.04</td>
</tr>
<tr>
<td>Somalia</td>
<td>24,300</td>
<td>140,375</td>
<td>22%</td>
<td>0%</td>
<td>0%</td>
<td>0.17</td>
</tr>
<tr>
<td>South Africa</td>
<td>7,800</td>
<td>22,323</td>
<td>2%</td>
<td>93%</td>
<td>99%</td>
<td>0.35</td>
</tr>
<tr>
<td>Sudan</td>
<td>134,000</td>
<td>853,520</td>
<td>34%</td>
<td>9%</td>
<td>Unknown</td>
<td>0.16</td>
</tr>
<tr>
<td>Tanzania</td>
<td>316,300</td>
<td>822,238</td>
<td>87%</td>
<td>17%</td>
<td>20%</td>
<td>0.20</td>
</tr>
<tr>
<td>*Togo</td>
<td>80</td>
<td>2,000</td>
<td>4%</td>
<td>0%</td>
<td>0%</td>
<td>0.04</td>
</tr>
<tr>
<td>*Uganda</td>
<td>6,000</td>
<td>34,498</td>
<td>17%</td>
<td>33%</td>
<td>53%</td>
<td>0.17</td>
</tr>
<tr>
<td>*Upper Volta</td>
<td>1,700</td>
<td>14,240</td>
<td>5%</td>
<td>60%</td>
<td>Unknown</td>
<td>0.12</td>
</tr>
<tr>
<td>*Zaire</td>
<td>377,700</td>
<td>1,820,936</td>
<td>78%</td>
<td>Unknown</td>
<td>Unknown</td>
<td>0.20</td>
</tr>
<tr>
<td>*Zambia</td>
<td>150,000</td>
<td>301,760</td>
<td>40%</td>
<td>Unknown</td>
<td>Unknown</td>
<td>0.50</td>
</tr>
<tr>
<td>Zimbabwe</td>
<td>30,000</td>
<td>199,467</td>
<td>31%</td>
<td>23%</td>
<td>68%</td>
<td>0.25</td>
</tr>
</tbody>
</table>

* Estimated Number of Elephants in Africa: 1,343,340 Elephants
* Estimated Size of Elephant Range: 7,320,505 Km²
* Elephant Numbers probably declining
war, in Zaire during the Shaba rebellion, and in Zimbabwe-Rhodesia, but more often there is a massive influx of weapons which leads to mass killings of wildlife. Elephants have also been victims of war in Zimbabwe when they have wandered across minefields sown within their range, each elephant detonating a string of mines before finally dying.

III. "ELEPHANTS AND ECOSYSTEMS" ACTION PLAN

Elephants live in a wide variety of habitats. They can be found on the seashores of Gabon, on the slopes of Mount Kenya, in the inhospitable semi-desert regions of Mauritania, Mali or Namibia, and in the equatorial forest of Zaire. Since the greatest long-term threat to the elephant is loss of this vast and varied range, it made sense to give the same priority to the protection of elephant habitats as to the species itself.

In this way, the idea of an "Elephants and Ecosystems" fundraising campaign was conceived, in which the elephant would symbolize the plight of all the remaining substantial populations of wild mammals on earth.

The African Elephant Action Plan was drawn up with this in mind and therefore has a much broader approach than a conservation plan designed to save only one species. Every recommendation listed here contributes to safeguarding the future of the elephant and its habitat, and thus all other species which share the elephant's ecosystem.

The recommendations have been arranged under four sub-programmes: Conservation, Economics, Education and Research.

In the Conservation Sub-Programme, recommendations relate to direct means of protecting elephants and their habitats; for example, the supply of equipment to National Parks, help in increasing manpower, designation of new parks and reserves, the preservation of the integrity of existing conserved areas, and the construction of elephant barriers.

In the Economics Sub-Programme, the most important requirement is for control over the ivory trade through the strengthening of CITES. At one level, this requires international collaboration to police certificates and tusk markers. NGO's can help by encouraging governments to improve controls and to ratify CITES; they could also facilitate the exchange of information between ivory importing and exporting countries, and conduct or support research to identify loopholes in and evasions of the law.

As Africa becomes more developed, education becomes a more effective tool in the interests of conservation. The greatest needs here are for environmental and conservation education to become an intrinsic part of school curricula, and for wildlife clubs to be established. Access to National Parks should be a right rather than a luxury. Through public awareness and support for conservation, the chances of preserving the integrity of national parks is much improved. Technical experts and financial assistance are required.

Research is essential for the success of most conservation projects - not only so that the right decisions are made about what needs to be done, but also
so that the authorities in the country concerned can be satisfied of the need for a particular conservation project. This politically persuasive role of research is very important. The recommendations listed under this Research Sub-Programme should not, therefore, be regarded as merely "non-relevant science" - but as a basic contribution to the conservation of the African elephants. On the other hand, it is important for researchers to take more note of the needs of management when designing their projects. The most pressing need in this Sub-Programme is continued monitoring of elephant population trends, especially in areas threatened by poaching. Several aerial surveys are listed which should be carried out as soon as possible.

IV. SURVEY METHOD

The information on which the range maps and population tables that follow is based has been derived from a number of sources: Questionnaire replies, published literature, our own aerial survey, and the results of other aerial surveys.

We now have a fair idea of the range of densities of elephants in the savannahs of Africa. The highest ever recorded lie at more than five elephants per square kilometre in Lake Manyara National Park in Tanzania, and the Garamba National Park in Zaire. Among the sparsest elephant populations were those recorded in South Kordofan province in Sudan, at 0.001 elephants per square kilometre.

At present, adequate counts have covered only a fraction of the elephant's range in Africa, and exclude the forest altogether.

The range of elephants has been derived from a network of informants. We have drawn detailed maps of elephant range for the 35 countries where they are found, and by extrapolating likely densities to the total range, have calculated elephant populations for each area and country.

This information, together with suggestions extracted from the Elephant Action Plan, was re-circulated to informants for their comments - and met with a big response. The information base has in this way gradually improved in a process of progressive approximation.

Even aerial surveys only give approximate elephant densities, which in most cases are underestimates. Improved techniques may lead to larger estimates, but even then most aerial counts are thought to be too low.

On the other hand, our estimates of elephant range may at times have included larger areas than they should, when, for example, our informants have included several isolated pockets of elephant range within the same sweep of the pen.

For this reason we have tended to choose elephant densities for uncensused areas which are deliberately on the low side. I hope this may compensate for any exaggeration of elephant range which may have occurred, and that our continental total is indeed a minimum.
We intend to publish this information on elephant range and numbers in a scientific journal in due course, where a more detailed explanation of the survey methods will be given, together with full references.

V. AFRICA (GENERAL) ELEPHANT ACTION PLAN

A. Recommendations for Conservation:

1. Elephants and Ecosystems Fund-Raising Campaign

Even the most cursory glance at the Elephant Action Plan reveals that millions of dollars are needed for the conservation of the species in Africa. The same is true of the Asian elephant which, with only some 60,000 remaining in the world, is in a much more desperate position. Save the habitat and save the species.

CONSERVATION ORGANIZATIONS SHOULD JOIN IN AN INTEGRATED ELEPHANTS AND ECOSYSTEMS FUND RAISING CAMPAIGN.

HIGHEST PRIORITY

2. Conservation Organizations

Conservationists should lobby their governments to:

- Develop National Management Plan centered on National Parks for the elephant and other species, including direct support for increased manpower and anti-poaching measures. Technical experts should be provided.

- Establish and fund grant programmes to send scientists to Africa to perform research and conservation work identified in the Action Plan.

HIGHEST PRIORITY

B. Recommendations for Economics:

1. Regulation of the Ivory Trade through CITES

Control over the ivory trade should be strengthened through the application of CITES. This will require united international action to apply the treaty through combined police action, searching through the finances of the ivory trading companies, and application of police methods to catch illegal traffickers.

Ratification of CITES should be encouraged, and financial and technical assistance made available to facilitate administration.

Funds should be available for the CITES Secretariat to collect and analyze data on world trade and enforcement problems.
A simple system of permits, specifically for ivory, should be introduced which should be internationally uniform and difficult to forge. It should be similar to a security document and signatures in each country of origin should be limited to three people. It should identify the real exporter and importer. Pseudonyms and transit warehouse should not be acceptable.

Funds are required to underwrite the cost of a CITES expert committee on the harmonization of permit forms and associated enforcement problems.

Funds will also be required to support regional meetings, workshops and consultations with governments with the aim of setting up scientific management authorities as effective bodies.

An international system of marking ivory should be introduced, in which a hole is drilled through the tusk hollow on the inner side of the curve, and a metal disc rivetted through the hole with a standard 'pop-rivetter'.

HIGHEST PRIORITY

2. Ivory Trade Bans

The exploitation of elephants for their ivory has been known to cause their local extinction in some parts of the continent. Today most of the annual decline in elephant numbers in most countries is caused by killing for ivory.

ALL CONSERVATION ORGANIZATIONS SHOULD WORK FOR STRICTER CONTROLS INCLUDING PARITIAL OR TOTAL BANS ON THE IVORY TRADE IN SOME COUNTRIES.

HIGH PRIORITY

3. Hunting

In most countries where licensed hunting is practiced it is a positive force for conservation. Not only does it provide important revenue, but legal hunters act as an unofficial patrol against poaching in remote areas. Provided it is properly controlled, licensed hunting does not have any significant impact on the status of elephant populations. In a few countries, however, licensing has been abused, and in such cases a hunting ban is appropriate.

4. Game Ranching

In some parts of Africa, especially in the west, there is an acute shortage of meat and most elephant poaching that occurs is more for food than ivory. In these areas, the establishment of properly managed game ranching might be beneficial not only for the people but also for the conservation of the species in that region. The experience of Zimbabwe could be utilized elsewhere.
C. Recommendations for Education:

1. Environmental Education Conference

Many people involved in ecological and wildlife issues in Africa today regard the provision of education as "the highest priority". Depending on the country concerned, the development of semi-autonomous wildlife clubs, or the insertion of an environmental component into the school curriculum, or both, might be appropriate. Most countries possess the few dedicated individuals necessary to get such projects off the ground, but funds, equipment, and advice are needed.

AN ENVIRONMENTAL EDUCATION FOR AFRICA CONFERENCE SHOULD BE ORGANIZED AND SPONSORED TO EXCHANGE IDEAS ON SCHOOL CURRICULUM, WILDLIFE CLUBS, PRACTICAL ORGANIZATION, TEACHING AIDS, EQUIPMENT, AND FINANCIAL REQUIREMENTS. ASSISTANCE SHOULD BE REQUESTED FROM AWLF, UNESCO, AND UNEP.

HIGH PRIORITY

2. Wildlife Training Scholarships

Funds are needed to sponsor students from all over Africa to attend Wildlife Management Colleges at Mweka in Tanzania or Garoua in Cameroon. A trust fund could be established for this purpose.

HIGH PRIORITY

3. Elephant Conference

It has been proposed that an International Elephant and their Habitats Conference be organized in which management, control of the ivory trade, anti-poaching methods, and other aspects of elephant conservation form the major themes. Assistance to sponsor the conference might be obtained from UNEP. The U.S. Government has expressed interest.

PRIORITY

4. Elephant Interest Group Newsletter

The EIG Newsletter is produced in Michigan and aims to be informative on elephant research, conservation and bibliographies. To date, this very useful publication has been privately financed, but additional funds are required.

$5,000

HIGH PRIORITY
D. Recommendation for Research:

1. Aerial Surveys

Essential elephant surveys are required urgently in several countries, in particular:

Kabalega Park, Uganda; Gourma, Mali; Zemongo Reserve, Eastern C.A.R.; Southern Cameroon; Northern Zaire and Northern Mozambique.

The IUCN Elephant Survey team could lend assistance.

$100,000

HIGH PRIORITY

2. Forest Censusing Methods

No reasonable method for estimating elephant numbers in heavily forested areas has been developed. Infra-red scanning techniques might provide an answer, and if successful, would be valuable in the forested habitats of Africa and Asia. A pilot project is needed to establish the techniques.

$100,000

HIGH PRIORITY

3. Radio-Tracking by NASA Satellite

Radio-tracking has proved invaluable in estimating elephant population ranges and movement in different habitats. Monitoring would be improved and could be extended to the remotest ranges if satellite tracking could be employed. Methods developed by NASA allow radio-tracking from satellites to a definition of one kilometre, but funds are needed to develop techniques for elephants.

$100,000 for pilot project

PRIORITY

4. Distinction between African and Asian Ivory

It is important to be able to distinguish readily between African and Asian ivory. Research should be conducted to develop a simple test for use by customs officials and police. Funds are required for the research project.

$50,000

HIGH PRIORITY

E. Recommendation - Executive Report:

The findings of the Elephant Survey should be produced in a slim, illustrated, attractive volume, written for the layman and circulated throughout Africa. This Executive Report may significantly promote awareness of the main problems affecting the elephant, and of
possibilities for conserving the species. Containing a succinct summary of elephant conservation problems, it would also be a suitable tool for fund raising.

$15,000 HIGHEST PRIORITY

F. Recommendation - "Pachyaction" Centre:

An office is needed for the administration of the Elephant Action Plan and could possibly be combined with the implementation of the Rhino Programme, to create the "Pachyaction" Centre.

$20,000 HIGHEST PRIORITY

TOGO Elephant Action Plan

Status Summary - December 1979

Almost nothing is known about elephants in Togo beyond the possibility that they may survive in a tiny range in the middle of the country. There may also be a second range in the north, co-terminous with neighbouring Benin and Upper Volta - but in all, it is doubted whether more than 100 elephants survive in the whole country.

It is understood, however, that the President of Togo is in favour of fostering wildlife in the country. His support should be requested in obtaining more information about any surviving elephants, and in offering protection for them in the future.

Recommendation for Conservation: TOGO

National Parks and Reserves

Togo should investigate the feasibility of establishing a National Park within the elephants' range. IUCN should offer strong support.

A ONE MONTH CONSULTANCY TO VIEW THE SITUATION REGARDING THE SITING OF THE NATIONAL PARK WITHIN THE ELEPHANT RANGE SHOULD BE OFFERED.

$3,000 HIGHEST PRIORITY
IUCN/WWF/NYVS Elephant Range Map

TOGO

SUMMARY OF ELEPHANT POPULATIONS AND RANGES

COUNTRY: TOGO
AREA: 56,000 KM²

<table>
<thead>
<tr>
<th>Total elephant range with extrapolated densities</th>
<th>SIZE (KM²)</th>
<th>NUMBER</th>
<th>DENSITY (ELE/KM²)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2,000</td>
<td>80 *</td>
<td>0.04 *</td>
</tr>
</tbody>
</table>

*IUCN Elephant Survey Provisional Estimate

Number of elephant ranges : 2

Mean size of elephant ranges : 1,000 KM²

Elephant range as % of whole country : 4%

% Elephant range falling within Parks & Reserves : 0%

% Elephant numbers falling within Parks & Reserves : 0%
UGANDA Elephant Action Plan

Status Summary - December 1979

Thousands of elephants have been killed in Uganda in the last eight years. In a very short time, the country's once healthy and quite considerable elephant population has become "endangered". The breakdown in law and order and the declining economy, the spread of human settlement and the ease of access to elephant range - all combined to create the circumstances in which anarchy descended on Uganda's National Parks.

During the seventies, Kampala became one of the main "ivory capitals" of Africa. Ivory exports soared as soldiers under Amin were accused of violating the National Parks - and machine-gunning elephants. In some parts of the country, the supply of meat in this fertile land ran low - and the people turned to wildlife for food.

Following the liberation of Uganda in 1979 it had been hoped that the killing would stop. But very recent reports indicate that the massacre of wildlife still continues, now conducted by Tanzanian troops.

According to sources in 1976, there were perhaps 6,000 elephants in the country. Today, numbers are certainly lower. In a reply to a questionnaire in 1979, it was formally admitted that 1,000 elephants were poached per year. Time is running very short.

The story of Uganda's elephants and their tragic decline is a lesson to all countries on how easy it is for an efficient Parks system to be destroyed. In particular, the case of Uganda shows how the consolidation of wildlife populations within National Parks makes them even more vulnerable to political disorder - especially when the roads exist to carry the "trophies" away.

It is imperative that a survey of elephant and other wildlife populations in the country's major National Parks is conducted as soon as possible.

Recommendations for Conservation: UGANDA

National Parks and Reserves

The National Parks of Uganda are in a critical state and in need of every possible assistance. Everything is required - from bootlaces for the rangers to vehicles. In view of the situation in the country, however, it is essential to ensure that financial and material donations are properly channeled.
EXTENSIVE AND MATERIAL SUPPORT IS URGENTLY NEEDED FOR NATIONAL PARKS IN UGANDA - FOR BOTH EQUIPMENT AND THE TEMPORARY SUPPORT OF STAFF. A TECHNICAL REPRESENTATIVE SHOULD BE APPOINTED TO ASSIST IN ADMINISTRATION AND MAINTENANCE OF FUNDS AND EQUIPMENT.

$200,000

**HIGHEST PRIORITY**

**Recommendations for Economics**

**Control of the Ivory Trade**

During the seventies the ivory trade in Uganda has been completely uncontrolled and has almost caused the extinction of elephants in the country.

**A TOTAL BAN ON ALL IVORY TRADING SHOULD BE IMPOSED IMMEDIATELY**

**HIGHEST PRIORITY**

**Recommendations for Education**

**Wildlife Clubs**

The Wildlife Clubs of Uganda made a good start, but the strife of the last few years caused the organization to close down.

**FUNDS ARE NEEDED TO REVIVE THE WILDLIFE CLUBS OF UGANDA**

$5,000

**HIGH PRIORITY**

**Recommendations for Research**

**Conservation and Management Study**

Declining elephant numbers are not unique to Uganda, but the downward trend is far more advanced and better documented than elsewhere in Africa. The effect of the reduction in elephant density on the habitat, on other animals, and the elephants themselves, could have far-reaching implications for the conservation and management of many elephant populations. A proposal has been developed which received partial funding from UNEP. Unfortunately, it had to be postponed but should be reactivated at the earliest opportunity.

$50,000

**HIGH PRIORITY**
IUCN/WWF/NYJS Elephant Range Map

UGANDA

Key:

Elephant Distribution
Parks and Reserves

Sources:

Edroma (1976)
Malpas & Eltringhan (1976)
Parker & Douglas-Hamilton (1976)
## SUMMARY OF ELEPHANT POPULATIONS AND RANGES

**COUNTRY:** UGANDA  
**LAND AREA:** 197,058 km²

<table>
<thead>
<tr>
<th>CENSUS ZONE</th>
<th>SIZE (KM²)</th>
<th>NUMBER</th>
<th>DENSITY (ELE/KM²)</th>
<th>TREND</th>
<th>DATE OF ESTIMATE</th>
<th>SOURCE</th>
<th>IUCN ELEPHANT SURVEY CLASSIFICATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>North Bunyoro (incl. Kabalega Falls South)</td>
<td>3,350</td>
<td>1,113</td>
<td>0.3</td>
<td>Decreasing</td>
<td>1976(aerial)</td>
<td>Malpas and Eltringham (1976)</td>
<td>Endangered</td>
</tr>
<tr>
<td>Kabalega Falls N.P. North</td>
<td>1,800</td>
<td>1,322</td>
<td>0.73</td>
<td>Decreasing</td>
<td>1976(aerial)</td>
<td>Malpas and Eltringham (1976)</td>
<td>Endangered</td>
</tr>
<tr>
<td>Elephant Sanctuary</td>
<td>3,520</td>
<td>300</td>
<td>0.09</td>
<td>Decreasing</td>
<td>1976(aerial)</td>
<td>Parker and Douglas-Hamilton (1976)</td>
<td>Endangered</td>
</tr>
<tr>
<td>Rwenzori N.P.</td>
<td>1,560</td>
<td>704</td>
<td>0.5</td>
<td>Decreasing</td>
<td>1976(aerial)</td>
<td>Malpas and Eltringham (1976)</td>
<td>Endangered</td>
</tr>
<tr>
<td>Kidepo Valley N.P.</td>
<td>1,300</td>
<td>463</td>
<td>0.4</td>
<td>Decreasing</td>
<td>1976(Total count)</td>
<td>Edroma (1976)</td>
<td>Endangered</td>
</tr>
<tr>
<td>Semliki G.R.</td>
<td>Unknown</td>
<td>Unknown</td>
<td>Unknown</td>
<td>Decreasing</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

Elephant range with estimates from sources: 11,530 3,902 0.34

Elephant range with extrapolated densities: 22,968 1,952* .09*

Total elephant range: 34,498 6,000* .17*

* IUCN Elephant Survey Provisional Estimate  
+ Number rounded.

Number of elephant ranges: 3  
Mean size of elephant ranges: 11,499 km²  
Elephant range as % of total land area: 17%  
% Elephant range falling within Parks or Reserves: 33%  
% Elephant numbers falling within Parks or Reserves: 53%
ZAIRE Elephant Action Plan

Status Summary - December 1979

Much of Zaire lies under heavy forest cover. It is therefore extremely difficult to estimate the number of elephants in the country. In 1976 elephants were counted in the Garamba National Park, situated in the northeast on the border with Sudan. The count revealed one of the highest elephant densities on the continent, at over 5 elephants per km². However, it is not likely that such densities are maintained over much of the country, for primary forest does not hold a great variety of food for elephants.

On the basis of the extrapolated densities (taking into account the results of surveys in neighbouring countries as well as that in Garamba) it is estimated that the country may hold about 360,000 elephants. On this basis, Zaire probably has more elephants than any other country in Africa.

Some observers would suggest that this estimate is too low. However, whether this is the case or not, there is little doubt that the number of elephants in Zaire is rapidly declining.

During the 1970's, reports of widespread poaching and the complicity of high officials in evading ivory trading laws led the Government to impose a total ban on tusk exports. In spite of the ban, imposed in 1978, Zaire has continued to be one of the leading producers of ivory on the continent. Not only is ivory smuggled in large quantities into Congo and Central African Republic, and probably into Uganda as well, but loopholes exist in the law and so-called "legal" exports of ivory have continued. The involvement of Government officials in the illicit trade has also continued.

Many of the major airlines were involved in carrying large ivory consignments to Europe, and at least one company is still involved in carrying regular consignments of ivory from Kinshasa to Johannesburg.

Some reports suggest that military personnel have been involved in machine-gunning elephants, especially in the north and east. Other reports mention poisoning of waterholes and vegetation to achieve the extermination of whole herds. No doubt many other species also suffer.

No details of surveys conducted recently in the Garamba have been received. However, it seems unlikely that today the Park still supports the same numbers of elephants that it did in 1976.

The highest priority for Zaire is for other countries to respect its law and to refuse consignments of illegal Zairois ivory. Reliable elements in the Government and anti-poaching forces should also receive the financial and moral support necessary to rehabilitate conservation in the country.

Recommendations for Conservation: ZAIKE
Equipment for National Parks

Many of the National Parks have become rundown and need re-equipment. A long list of items, ranging from uniforms to guns and vehicles, has been received from the Department. However, in present circumstances, assurances of donated equipment reaching its intended destination cannot be reliably given. National Park needs should therefore be considered only on an individual Park basis and not at national level.

EXTENSIVE FINANCIAL AND MATERIAL SUPPORT IS URGENTLY NEEDED FOR SEVERAL NATIONAL PARKS. A TECHNICAL REPRESENTATIVE SHOULD BE APPOINTED TO OVERSEE USE OF FUNDS AND EQUIPMENT.

$70,000

Poaching Control in the Virunga Volcanos

The capacity of anti-poaching units to control illegal killing of wildlife in the Virunga Volcanos region is hampered by the existence of international frontiers within the conservation area. Anti-poaching units of one country do not have authority in another.

IUCN SHOULD SUPPORT TRIPARTITE TALKS BETWEEN AUTHORITIES IN RWANDA, ZAIRE AND UGANDA TO DISCUSS THE ESTABLISHMENT OF JOINT ANTI-POACHING PATROLS FOR THE VIRUNGA VOLCANOS REGION. FUNDS WILL BE REQUIRED TO SUPPORT AND EQUIP THE NEW UNITS.

HIGHEST PRIORITY

Recommendations for Economics:

Control of the Ivory Trade

Zaire has signed and ratified the CITES convention but has yet to enforce it. No scientific authority exists in the country to administer the convention.

ALL SIGNATORIES OF CITES SHOULD REFUSE CONSIGNMENTS OF ZAIROIS IVORY UNTIL THE TRADE IS REGULARIZED WITHIN THE COUNTRY.

HIGHEST PRIORITY

Recommendations for Education:

Development of Gangala-na-Bodio

Gangala-na-Bodio is the site of the only elephant domestication centre in Africa. The School began in 1900 and was expanded during the twenties. In 1976, there were only nine domesticated elephants remaining.
Key:

- Elephant Distribution
- Parks and Reserves

Sources:
Douglas-Hamilton (1979)
SUMMARY OF ELEPHANT POPULATIONS AND RANGES

COUNTRY: ZAIRE
AREA: 2,344,885 km²

*Number rounded.

<table>
<thead>
<tr>
<th>CENSUS ZONE</th>
<th>SIZE (km²)</th>
<th>NUMBER</th>
<th>DENSITY (ELE/KM²)</th>
<th>TREND</th>
<th>DATE OF ESTIMATE</th>
<th>SOURCE</th>
<th>IUCN ELEPHANT SURVEY CLASSIFICATION</th>
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<tbody>
<tr>
<td>Virunga N.P.</td>
<td>8,000</td>
<td>2,500</td>
<td>0.31</td>
<td>Decreasing south Increasing</td>
<td>1977</td>
<td>Von der Becke (1977)</td>
<td>Vulnerable</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>centre 1977</td>
<td></td>
<td></td>
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<tr>
<td>Kahuzi-Biega N.P.</td>
<td>6,600</td>
<td>3,300</td>
<td>0.50</td>
<td>Increasing</td>
<td>1977</td>
<td>de Schryver (1977)</td>
<td>Safe</td>
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<tr>
<td>Upemba N.P.</td>
<td>10,000</td>
<td>5,000</td>
<td>0.50</td>
<td>Unknown</td>
<td>1976</td>
<td>Savidge et al (1976)</td>
<td>Safe</td>
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<tr>
<td>Salonga Parks</td>
<td>36,000</td>
<td>18,000</td>
<td>0.50</td>
<td>Unknown</td>
<td>Rough estimate</td>
<td>Douglas-Hamilton (1979)</td>
<td>Unknown</td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1979</td>
<td></td>
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<tr>
<td>M'Bomu Reserve</td>
<td>3,450</td>
<td>1,762</td>
<td>0.51</td>
<td>Unknown</td>
<td>1976</td>
<td>Savidge et al (1976)</td>
<td>Unknown</td>
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<tr>
<td>Compagnie Mabé Telia (North)</td>
<td>2,850</td>
<td>1,978</td>
<td>0.69</td>
<td>Unknown</td>
<td>1976</td>
<td>Savidge et al (1976)</td>
<td>Unknown</td>
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<tr>
<td>Compagnie Mabé Telia (South)</td>
<td>1,950</td>
<td>875</td>
<td>0.45</td>
<td>Unknown</td>
<td>1976</td>
<td>Savidge et al (1976)</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Ango-Uda</td>
<td>1,300</td>
<td>1,403</td>
<td>1.08</td>
<td>Unknown</td>
<td>1976</td>
<td>Savidge et al (1976)</td>
<td>Unknown</td>
</tr>
</tbody>
</table>

| Elephant range with estimates from sources | 75,150 | 57,488 | 0.76 |
| Elephant range with extrapolated densities | 1,745,786 | 314,241 | 0.18* |
| Total elephant range | 1,820,936 | 377,700** | 0.20* |

Number of elephant ranges: 5
Mean size of elephant ranges: 364,187
Elephant range as % whole country: 78%
% Elephant range falling within Parks & Reserves: Unknown
% Elephant number falling within Parks & Reserves: Unknown
THE SCHOOL SHOULD BE REVIVED AND DEVELOPED FOR TOURISTIC, EDUCATIONAL AND SYMBOLIC REASONS.

DESIRABLE

Recommendations for Research:

Survey of Garamba National Park

In view of disturbing reports of widespread poaching in northeastern Zaire, it is imperative that a count be conducted to establish elephant status in the Garamba National Park and Northern Zaire. Carcasses should be counted according to methods practised in East Africa. Funds will be required.

HIGHEST PRIORITY

Forest Censusing

In view of the difficulties of assessing numbers of elephants in heavily forested areas, it has been proposed that infra-red methods be developed (see Africa General section).

DESIRABLE

See "LITERATURE CITED" at the end of the following excerpts.

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