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## CONFLICT BETWEEN WILDLIFE AND PEOPLE IN KARIBA TOWN, ZIMBABWE\* \*

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### Abstract

*This article analyses the findings of a questionnaire survey that sought to establish the relationship between wildlife and the people of Kariba and to make some policy proposals. The survey showed that there are conflicts between wildlife and people in Kariba town. Elephants and buffaloes damage and destroy property and frighten or kill people. Baboons vandalise homes. Residents are not compensated for death, injury or property damaged by animals. In response, people drive elephants away from residential areas using stones and burning fire logs. They also kill or injure buffaloes using snares. There is conflict between residents and the Department of National Parks and Wildlife Management officials over illegal procurement of resources from the national park. Despite the conflicts, over 80% of the residents are positively inclined towards conservation since they indicated that poachers should be arrested, it is necessary to conserve animals, there should be no free access to the resources. Over 50% indicated that animals and people should be isolated to alleviate the existing problems.*

*It is proposed that a multi-action approach should be used to ameliorate the human-animal conflict in Kariba. This should include protection of residents from wildlife, extension of benefits to residents, involvement of residents in the management of the resource, setting-up a fund to assist and/or compensate victims of wildlife injuries or deaths, educating residents on how to coexist and reserving the game corridors for wildlife movement. This will help to foster and create more positive attitudes towards wildlife conservation. Otherwise, human hostility will continue to pose a danger to animals and national park resources in general.*

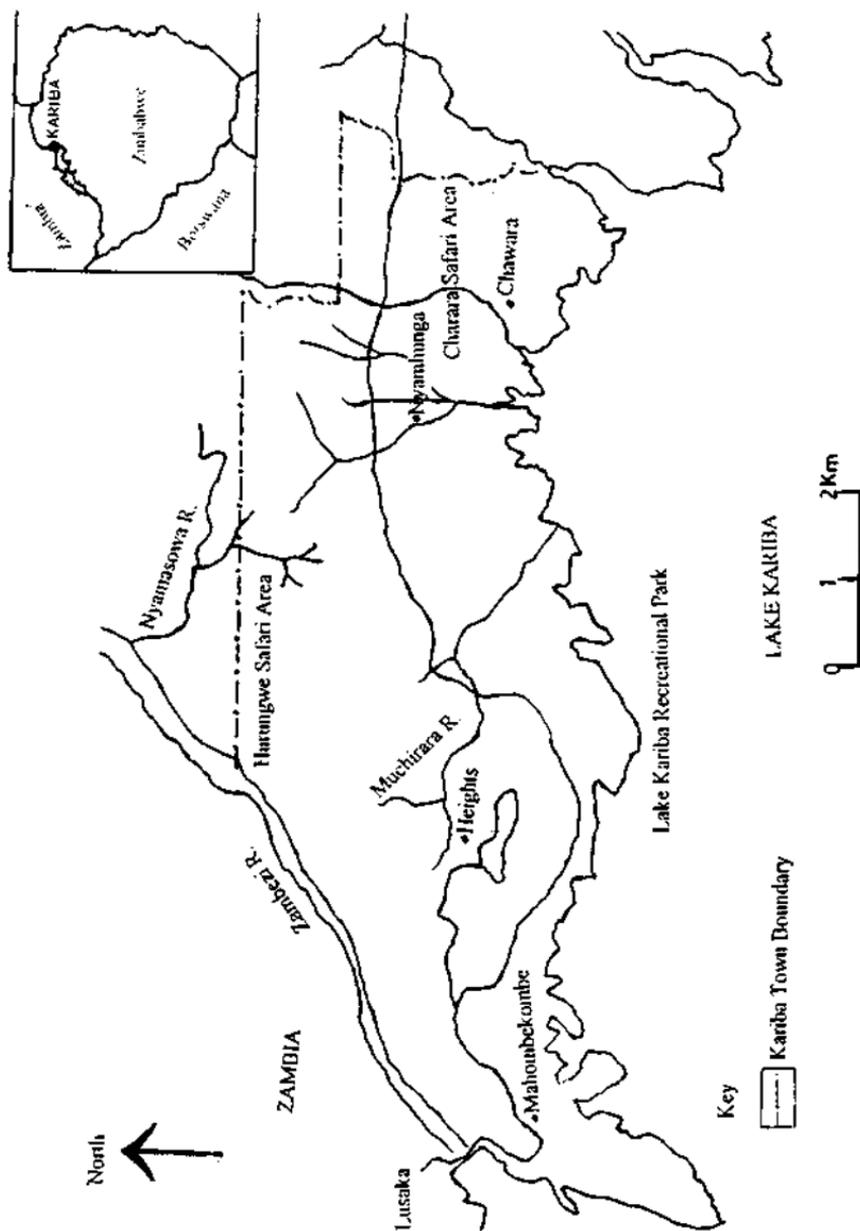
### INTRODUCTION

Prior to colonialism, African communities were dependent on wild animals and plant resources. Communities exercised collective access to the resources through complex sharing and rotation schemes. Resource utilisation was controlled by local institutions and bound by tribal laws

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FIGURE 1: LOCATION OF KARIBA TOWN



and knowledge.<sup>1</sup> Colonialism replaced the traditional wildlife management systems with European models in which large tracks of land were taken and designated as protected areas (National Parks and Safari areas). The objective was to isolate the animals in order to protect them from human activities considered destructive.<sup>2</sup>

Local communities were packed into restricted land bases and prohibited from utilising the resources within protected areas. This created problems in the area of wildlife management.<sup>3</sup> Wild animals inflicted damage on people, their property, crops and livestock. Communities illegally harvested animals within the protected areas. Antagonism grew between local communities and wildlife. This is a major source of conflict in all sub-Saharan African countries. This conflict, especially the unauthorised harvesting of wildlife in protected areas, is threatening the sustainability of the protected areas.<sup>4</sup>

Many cases of conflict between wildlife and local communities living adjacent to protected areas are documented.<sup>5</sup> Despite law enforcement, local communities continue to kill wildlife, posing a threat to their survival. Wildlife managers have been unable to cope with the problem and, as a result, pressure on the dwindling wildlife populations is increasing.<sup>6</sup>

In order to resolve the wildlife problems, the concept of "community based, community-directed" wildlife management has been introduced in most African countries. The objective is to manage wildlife in co-operation with local people. The argument is that, unless local communities are able to benefit financially from neighbouring wildlife resources, poaching

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- 1 Patel, H. *Sustainable Utilisation and African Wildlife Policy: The Case of Zimbabwe's Communal Areas Management Programme for Indigenous Resources (CAMPFIRE), Rhetoric or Reality?* [Cambridge, Indigenous Environmental Policy Centre (IEPC), 1998].
  - 2 Takdforyan, A. 'Towards local management of wildlife in Africa? The case of east Cameroon' In N. Christoffersen, B. Campbell and J. du Toit, (eds.) *Communities and Sustainable Use: Pan-African Perspectives* (IUCN, 1996), 146-157.
  - 3 Patel, *Sustainable Utilisation and African Wildlife Policy*.
  - 4 Newmark, W. D. and Leonard, N. L. 'The attitudes of local people toward Kilimanjaro National Park and Forest Reserve' in W. D. Newmark, (ed.) *Conservation of Mount Kilimanjaro* (IUCN, Gland, 1991), 87-96; Taylor, R. *From Liability to Asset: Wildlife in the Omay Communal Land of Zimbabwe* [London, International Institute for Environment and Development, Wildlife and Development Series (8), 1995], 1-16.
  - 5 Hawkes, R. K., "Crop and livestock losses to wild animals in the Bulitlimangwe Natural Resources Management Project Area" (Harare, University of Zimbabwe, Centre for Applied Social Sciences, 1991, Unpubl.); Murphree, M. "Communities as Resource Management Institutions" (Harare, University of Zimbabwe, Centre for Applied Social Sciences, 1991, Unpubl.); Nepal, S. K. and Weber, K. E. 'Prospects for coexistence: Wildlife and local people', *Ambio*, (1995), 24 (4), 238-245; Taylor, *From Liability to Asset*.
  - 6 Patel, *Sustainable Utilisation and African Wildlife Policy*.

of wildlife will continue.<sup>7</sup> Many projects of this type have been launched throughout Africa over the last ten years.<sup>8</sup>

An example of a project that was developed to address the wildlife problem in Zimbabwe is the Communal Areas Management Programme for Indigenous Resources (CAMPFIRE). The guiding philosophy of CAMPFIRE is sustainable rural development that enables rural communities to manage and benefit directly from indigenous resources.<sup>9</sup> Although extensively supported by most indigenous Zimbabweans, CAMPFIRE's approaches and implementation remain embedded in colonial ideology.<sup>10</sup> The programme is largely directed by external organisations and the private safari operating industry and business and operational agreements are mainly between Rural District Councils and the private safari industry.<sup>11</sup> Genuine participation by rural communities in wildlife has not been effectively addressed by CAMPFIRE. Human-animal conflict is still a major problem that has not been effectively resolved in Zimbabwe, as can be seen from the case of Kariba town, whose human-wildlife relationship will now be examined.

Kariba town is situated in the Northern part of Zimbabwe on the border between Zambia and Zimbabwe (see Figure 1). The town is bordered by Hurungwe Safari Area in the North, Charara Safari Area in the East and by the lakeshore in the South and Southeast. It is situated within a national park. The Department of National Parks and Wildlife Management (DNPWM) manages wildlife resources within the national park. The DNPWM allows game exploitation through safari hunting in Charara Safari Area. The majority of people employed in Kariba are engaged in natural resources and wildlife related activities such as

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- 7 Madzudzo, E. 'Community based natural resource management in Zimbabwe: Opportunities and constraints' (Harare, University of Zimbabwe, Centre for Applied Social Sciences, 1998, Unpubl.); Martin, R. B. 'Communal area management plan for indigenous resources (CAMPFIRE)', in R. H. V. Bell and E. McShane-Caluzi (eds.) *Conservation and Wildlife Management* (Washington, US Peace Corps, 1984), 221-231; Patel, *Sustainable Utilisation and African Wildlife Policy*.
- 8 IIED, *Whose Eden? An Overview of Community Approaches to Wildlife Management* (London, International Institute of Environment and Development, 1994).
- 9 Child, B. 'The practice and principles of community-based wildlife management in Zimbabwe: The CAMPFIRE programme' in *Biodiversity and Conservation* (1996), V, 369-398.
- 10 Dzingirai, V. 'Take back your CAMPFIRE: A study of local level perceptions to electric fencing in the framework of Binga's CAMPFIRE programme' (Harare, University of Zimbabwe, Centre for Applied Social Sciences, 1995, Unpubl.); Murombedzi, J. *Decentralising Common Property Resources Management: A Case Study of the Nyaminyami District Council of Zimbabwe's Wildlife Management Programme* (London, International Institute of Environment and Development Drylands Network Programme, Paper No. 30, 1991); Patel, *Sustainable Utilisation and African Wildlife Policy*.
- 11 Murombedzi, *Decentralising Common Property Resources Management*; Dzingirai, 'Take back your CAMPFIRE'; Patel, *Sustainable Utilisation and African Wildlife Policy*.

fisheries, hunting, tourism and crocodile farming.<sup>12</sup> The fishing industry and tourism employs 43.1% of those in formal employment.<sup>13</sup> The development of Kariba has been dominated by the construction of Kariba dam in the late 1950s. This transformed an isolated, sparsely populated area into one of significant national importance for the purposes of power generation, fishing and tourism.<sup>14</sup> While Lake Kariba was filling, animals were rescued from the flooding valley and moved to areas that were designated as national parks and safari areas. The transformation of the area created a number of conflicts on resource use between animals and human beings.<sup>15</sup> Large mammals, mainly elephants (*Loxodonta africana*, Blumenbach) and buffaloes (*Syncerus caffer*, Sparman), move through human settlements, presumably following their traditional routes (game corridors) to the lakeshore. These movements are more pronounced during the dry season and are a response to seasonal changes in precipitation and food availability. As elephants and buffaloes pass through residential areas on their way to the shore, they sometimes destroy property and occasionally kill people.

Owing to the increasing need for land, some of the game corridors have been closed by urban development. Most of the shoreline area has been developed into residential and commercial properties. This has restricted the animals' access to the lakeshore and has led to increased contact between animals and people. The result has been increasing conflict between people and animals, with people developing a hostile attitude towards wildlife and wildlife conservation authorities, since they feel that exclusive preference is being given to wildlife conservation. Wildlife is, thus, both a very important resource in Kariba and a source of conflict. The question is: "Should there be wildlife in an urban area, and if so, what steps can be taken to make it easier for people and wildlife to coexist?"

In the light of the above, this article seeks to analyse the conflict between wildlife and people in Kariba Town through examining (i) perceptions and attitudes of Kariba residents to wildlife and (ii) the sources and nature of problems and conflicts between animals, people and officials of the Department of National Parks and Wildlife Management. The focus in this article is conflict between wildlife and people in an urban area.

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12 Magadza, C. H. D. "Conflicts of resource use on the Lake Kariba environs". *Nature and Resources*. (1986), 22. (4) 2-12.

13 Mhlanga, L. "Information on employment, housing and education in Kariba Town, Zimbabwe" (Kariba, University Lake Kariba Research Station, Zimbabwe, Unpubl., 1996).

14 Conyers, D. and Mlalazi, A., "Kariba: Whose town?" *Proceedings of the University Lake Kariba Research Station Seminar Series*, Bulletin No. 2/96, (1995), 10-34.

15 Magadza, "Conflicts of resource use".

## METHODS AND MATERIALS

Research findings presented in this article are based on a July 1995 questionnaire survey and an open debate held at University Lake Kariba Research Station in which people from various government departments, local researchers, and Kariba residents participated. Questionnaire interviews were carried out with 414 households, randomly selected in four townships. A street map for each residential area was used to select households. The sample size was estimated from the total number of households and aimed to cover approximately 10% of the population. The interviews were carried out in Nyamhunga, Mahombekombe, and an unplanned settlement popularly known as "Baghdad", while questionnaires were sent by post to "Heights".

During household surveys people were asked to provide information under the following three subsections:

- (a) **Conservation attitudes and perceptions regarding wildlife;** problems caused by animals, problems caused by people, problem animals, compensation for property damage or death, whether it is necessary to conserve animals, whether people were coexisting happily with animals, isolation of people from wildlife and main benefactors of wildlife.
- (b) **Management of national parks;** awareness of conflict between residents and game scouts, effectiveness of game scouts and poaching.
- (c) **Constraints and hardships caused by the surrounding national parks;** dependency on the national parks resources and perceptions on free access to the national parks resources.

Meanwhile, the debate at the University Lake Kariba Research Station covered a wide range of topics, including the resident's attitudes towards wildlife, law enforcement agencies, and conflict between wildlife and people.

Although households to be sampled were randomly selected from a map, interviewees were selected based on chance encounters within the house by the interviewer. While this approach may have induced a limited sampling bias in the results, its findings are consistent with a recent study on conservation versus development in Kariba and can, thus, be regarded as reflecting local opinions reasonably accurately.<sup>16</sup>

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16 Dunn, M. "Wildlife versus Development: The Story of Kariba's Game Corridors" (University Lake Kariba Research Station, Seminar Series, 1999).

## RESULTS

### **Conflicts between wildlife and people**

Over 90% of the respondents indicated that the location of Kariba inside a national park was problematic, as, because of strict regulations, there is very limited access by people to national parks resources, while animals move into residential areas freely. 40.1%, 36.2% and 23.7% of the respondents considered elephants, baboons, and buffaloes, respectively, to be the major sources of problems. Buffaloes and elephants are dangerous animals, which occasionally kill and maim people. A high proportion of the respondents considered elephants to be the most threatening animals, as they damage and destroy property. Buffaloes and elephants, occasionally, attack and kill people walking about at night, while baboons vandalise homes and are the most bothersome animals since they virtually live in the townships.

Over 70% of the respondents recognised that residents also cause problems to animals despite being prohibited by law. Among the problems identified were: human encroachment into the national park to obtain firewood, medicinal plants, thatching grass and manure; teasing and driving animals, especially elephants, using stones and burning fire logs; and snaring animals.

Over 60% of the respondents highlighted existing conflicts between residents and DNPWM officials (Table 1). Conflicts occur when game scouts employed by the DNPWM, whose responsibilities are to conserve, manage and safeguard natural resources, apprehend poachers. Residents strongly feel that they are unjustly denied access to the resources and expressed strong bitterness over the fact that the game scouts arrest them for collecting firewood and manure in the National Park. This conflict arises from the fact that, while the DNPWM believes that the collection of wood is harmful to the ecosystem, the residents of Kariba feel strongly that they should have access to this and other resources.

The other cause of conflict is the residents' perception that authorities seem to be more concerned about protecting wildlife at the people's expense and do not seem to show any concern over loss of human life and destruction of property. This is evidenced by the fact that the Department does not provide any compensation for death and/or property damage caused by wildlife. People are also disgruntled over the large amount of land reserved for the exclusive use of wildlife.

### **Dependency on wildlife and national park resources**

Forty-three percent of the respondents cited government, while 35% gave the tourism industry as the main beneficiaries, respectively. This is so

Table 1:

RESPONSES TO THE ISSUES OF DEPENDENCE, BENEFITS, ACCESS TO PARK RESOURCES, CO-EXISTENCE, CONFLICT AND EXCLUSION OF WILD ANIMALS FROM RESIDENTIAL AREAS OF KARIBA

Question	Percentage "Yes" response
Are you dependent?	90.3
Are you benefiting?	51.1
Should there be free access to resources?	15.8
Should people and wildlife co-exist?	55.1
Are you aware of conflicts?	67.9
Should animals be excluded from residential areas	52.7

because the government receives foreign currency from tourists and the tourism industry thrives on wildlife that draws the tourists to the country. Seven percent considered the DNPWM, the institution that has a statutory mandate to conserve wildlife and sustainably manage the resource, as the beneficiary, while 4.2%, 1.4%, 1.4% and 7.1% identified the whole country, poachers, residents and Kariba Town Council as beneficiaries.

Slightly over half of the respondents indicated that they are benefiting, either through being employed in hotel and safari companies, or through selling of curios and crotchet to tourists, game viewing and illegal procurement of game meat, manure, and firewood. Slightly less than half of the respondents felt that they are not having any direct benefit from wildlife conservation in spite of having to coexist with animals.

Over 90% indicated that they are directly dependent on resources from the national park (Table 1) through their access to firewood, manure, game meat, fish, water, electricity, wild fruits, mice, grass, and medicinal plants. Of these, however, only water and electricity and, probably, fish are obtained legally. Over 80% of the respondents indicated that there should be no free access to national park resources. Respondents suggested that there should be legalised controlled access; otherwise the resources will be exhausted due to over-exploitation. An arrangement under which residents were given "controlled allocations" of firewood and game meat was considered most welcome. Most respondents said that they were willing to pay a reasonable fee for these resources. Other than benefiting directly, respondents also suggested that the Kariba Town Council should receive a percentage of money generated from wildlife conservation activities. This revenue would be then used to develop the town's facilities for the benefit of the residents.

### Conservation attitudes

Despite the conflicts and problems encountered, most respondents are positively inclined towards conservation. Conservation attitudes were assessed by asking whether respondents are agreeable to complete isolation from animals, arresting of poachers, free access of people to the resources and whether it is good to conserve animals in the current situation. Fifty-two percent suggested that there should be isolation. Ninety percent, 80%, and 84%, respectively, indicated that poachers should be arrested, that it is necessary to conserve animals, and that there should be no free access. The majority suggested, however, that measures should be taken to alleviate their problems through compensation to property damage, death, or injury.

All the respondents acknowledge that poaching is rife in Kariba and attributed this to the economic hardships faced by the residents. They noted that illegal hunting of wild animals was increasing and that only a small percentage of the poachers were caught. This, they thought, might explain the observed gradual decrease of animals, particularly small animals, over the years.

### DISCUSSION

Kariba residents appreciate the fact that wildlife in Kariba is there to stay and the development of the town is dependent on it. They realise their heavy dependency on both wildlife resources and national park resources in general and appreciate that it is essential to conserve resources surrounding them. This is not surprising given the fact that over 50% of them are engaged in wildlife related jobs.

The positive attitudes towards conservation of adjacent protected areas and resources are consistent with findings in Tanzania and other African countries. Studies of Tanzania's experience showed that over 71% of the 1 190 people living within 12 kms of a park in Tanzania were strongly opposed to the abolition of adjacent protected areas,<sup>17</sup> while 84% of the 206 people living adjacent to Kilimanjaro National Park who were surveyed were also opposed to its abolition.<sup>18</sup> Similarly, only 6% of 182 people living adjacent to a conservation area in Natal, South Africa, indicated that it was unimportant to retain it.<sup>19</sup> Also notable is the fact

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17 Newmark, W. D., Leonard, N. L., Sariko, H. I., and Gamassa, D. M. "Conservation attitudes of local people living adjacent to five protected areas in Tanzania", *Biological Conservation*, 63 (1993), 177-183.

18 Newmark, W. D. and Leonard, N. L. "The attitudes of local people toward Kilimanjaro National Park and Forest Reserve", 87-96.

19 Infield, M. "Attitudes of a rural community towards conservation and a local conservation area in Natal, South Africa", *Biological Conservation*, 45 (1988), 21-46.

that suggestions to convert a National Park into agricultural land were strongly opposed in Arusha and Morogoro regions of Tanzania<sup>20</sup> and in Rwanda.<sup>21</sup>

The reason for supporting the preservation of National Parks by local communities is that it generates revenue and foreign exchange through tourism. This is particularly important for Kariba where the tourism industry relies to a considerable extent on wild animals within the park. Tourism is a major economic activity and employs 28% of the people in formal employment.<sup>22</sup> There are also many tourist-oriented small businesses, such as curio shops and small-scale crocheting businesses. Studies elsewhere have shown that people perceive the values of conservation areas in terms of generating revenue and foreign currency through tourism.<sup>23</sup> Communities also appreciated the need to conserve wildlife for future generations.

Residents are, however, becoming intolerant to the damage inflicted on them and their properties by elephants and buffaloes. It is clear that, while residents are generally positively inclined towards conservation, this attitude can gradually become eroded unless they are protected from animals and their needs are addressed. As it is, currently, in Kariba Town, people and animals can barely coexist and it is evident that policy changes are necessary to ensure that the residents' positive attitudes towards conservation do not eventually fizzle out. On this point, most respondents suggested that one of the necessary changes is to ensure that there was minimal human/animal interaction and contact. They suggested, for instance, the erection of a perimeter electric fence around the two main high-density suburbs, Nyamhunga and Mahombekombe, as has been done elsewhere under the CAMPFIRE programme.

Electric fences have been constructed under the CAMPFIRE programme as a way of dealing with problem animals.<sup>24</sup> However, local

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20 Pennington, H. "A living trust: Tanzanian attitudes toward wildlife and conservation", (MSc. Thesis, Yale University, New Haven, Connecticut, 1983).

21 Harcourt, A. H., Pennington, H. and Weber, A. W. "Public attitudes to wildlife and conservation in the Third World", *Oryx*, 20, (1986), 152-154.

22 Mhlanga, L. "Information on employment, housing and education in Kariba Town, Zimbabwe" (Kariba, University Lake Kariba Research Station, Zimbabwe, 1986).

23 Weber, A. W. "Socioecologic factors in the conservation of the Afromontane forest reserves", in J. S. Gartlan, C.W. Marsh and R. A. Mittermeier (eds.) *Primate Conservation in the Tropical Rain Forest* (New York, Alan R. Liss, 1987), 205-29; Pennington, "A living trust".

24 Dzingirai, V. "Electric fencing: Why people in Btnga oppose even the idea: A challenge for council and CAMPFIRE trainers" (Harare, University of Zimbabwe, Centre for Applied Social Sciences, 1993, Unpubl.); Dzingirai, "Take back your CAMPFIRE"; Hoare, R. E. and Mackie, C. S. "Problem animal assessment and the use of fences to manage wildlife in the communal lands of Zimbabwe" (Harare, World Wide Fund for Nature, Zimbabwe, 1993).

people objected strongly as they were reluctant to be restricted by fences since this, sometimes, led to loss of land on the other side of the fence, limited future expansion, and excluded natural resources from them.<sup>25</sup> Before fencing can be used as an option, therefore, a thorough investigation of people's opinions on the matter needs to be undertaken and the decision to proceed with fencing has to involve the participation of the people in order for them to have a sense of ownership of and responsibility for the project.<sup>26</sup> Where fences were put up without consultations with the local people, they have been pulled down. For instance, an electric fence installed around Liwonde National Park in Malawi was stripped as local people used the fence wire to produce snares, while poaching for game meat inside the Conservation Park increased dramatically.<sup>27</sup> It is thus necessary to address the problems that Kariba residents are experiencing and to encourage them to participate actively in the management and conservation of the resources around them. It is now well accepted that, to reduce Africa's wildlife survival crisis, local people should participate fully in their management and conservation.

It is being suggested here that the solution to Kariba's problems requires an integrated problem solving approach in the short and long run. Possible solutions are discussed below. For example, extension of benefits to residents can help to ameliorate human-wildlife conflict in Kariba. At present, residents perceive that they are benefiting from the resource indirectly through their involvement in the tourism industry. Since this is already perceived as a tangible benefit, educating the rest of the residents that benefits of employment and the generation of revenue and foreign exchange by protecting wildlife are important can foster this attitude. There is also need to increase the participation of locals in the tourism industry in the form of either new business ventures or co-operatives. Efforts should also be made to encourage the local people to engage in small-scale tourist facilities such as small restaurants, markets, craft centres and bed and breakfast facilities.

In addition, regardless of Kariba's urban setting, it is important to ensure that residents have a meaningful level of control over, or ownership of, the wildlife with which they share the land and to educate them about the fact that, by managing the wildlife wisely, they can benefit from it. With an estimated population of 28 000 people and an annual population

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25 Dzingirai, "Electric fencing".

26 World Wide Fund For Nature, "Conserving Africa's Elephant" (World Wide Fund For Nature, 1997).

27 *Ibid.*

growth rate of 5.5%,<sup>28</sup> it may not be possible for each household to derive direct benefits. Benefits may be non-consumptive, for example, through involvement in the tourism industry. A fund can also be set up where contributions are drawn from all stakeholders in Kariba and the DNPWLM, who derive benefits from maintaining wildlife in the urban area. This fund would be used to assist and/or compensate victims of wildlife injuries and/or deaths and to fund improvements in the town's social infrastructure. A participatory process should be used to determine the extent and nature of benefits that the residents require.

As a long-term solution, there is need to educate the community about wildlife conservation and how to coexist with animals. This is very important and has potential to alleviate some of the existing problems. Education programmes will create more positive attitudes towards wildlife conservation in future. This has already been enacted as Policy C5 (iii) in the Kariba Lakeshore Combination Master Plan stating that "*council should educate local residents on the value of wildlife and on the ways to live with wild animals*".<sup>29</sup>

Town planning and development has a significant bearing, both in the present and in the future, on the present problems. If game corridors are not protected from property developers, the problems of human/animal interference will persist and worsen in future. It is necessary that town planners reserve the corridors for wildlife movement in order to permit the movement of animals from inland to the lakeshore. Land-use planners have to realise that reducing encounters between people and animals can minimise conflict situations. As part of the Parks Planning Programme, the DNPWLM should consider the creation of a buffer zone between Kariba town and the National Parks. Limited usage of the buffer zone by residents for natural resources such as fuel wood and medicinal plants can ultimately reduce the conflict.

Furthermore, there is need for conservation authorities to carry out periodic inventories of animals in Kariba's surroundings so that they are always aware of the ratios of animals to people and plan accordingly. As it is, it is possible that the population of some animals, especially baboons, has increased beyond the carrying capacity and need to be culled. Another factor that has to be considered is possible animal behavioural change due to hunting pressure, over exposure to tourists, and human encroachment. For example, elephants seem to move from hunting areas towards Kariba town in order to escape threats from poachers. It would

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28 Conyers and Mlalazi, "Kariba: Whose town?", 10-34.

29 Combination Authority, *Kariba Lakeshore Combination Master Plan. Written Statement* (Harare, Ministry of Physical Planning and National Housing, Department of Physical Planning, Zimbabwe, 1998).

also appear as if the increase in human-elephant conflicts is due to the fact that elephants are becoming more aggressive and are going out of their way to attack people.<sup>30</sup> More baboons are now invading homes in search of food. It is therefore necessary to understand these various issues before policies such as culling, are implemented, especially given the fact that some animal species, such as elephants, are protected under CITES (Convention on International Trade in Endangered Species).

Sustainability of national park resources surrounding Kariba town is dependent on attitudes of the residents. The existing conflicts have to be addressed in order to ensure that positive attitudes towards wildlife are maintained. Although Kariba residents resent the problems caused by animals, a high proportion of them still have a positive attitude towards wildlife conservation. In order to foster this attitude, it is necessary to resolve the existing conflicts. The survival of wildlife in national parks surrounding Kariba will ultimately depend on changing the perceptions of the people.

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30 Conyers and Mlalazi, "Kariba: Whose Town?", 10-34.