

WILDLIFE CONSERVATION AND ENVIRONMENTAL MANAGEMENT

IN AN ‘OUTPOST OF TYRANNY’

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ZIMCONSERVATION OPINION SPECIAL REPORT



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EXECUTIVE SUMMARY

Zimbabwe finds itself in the midst of an unprecedented political and social upheaval as a direct result of the government-instigated private-land seizures that began in the year 2000. Throughout this turmoil there has been a widespread fear of state agents, lack of fuel, corruption and a rampant disregard for ethics, hyperinflation, a lack of foreign currency, loss of skilled professionals to other countries, a disintegrating education system, widespread HIV and skyrocketing mortality rates, a collapsing tourism industry and a general lack of information about what is really happening in the country.

These rapid social and economic changes have been extremely detrimental to both wildlife and environment, yet the wildlife crisis has been somewhat overlooked given the overwhelming humanitarian disaster gripping the country. Information about the wildlife and conservation industry is scarce and otherwise anecdotal as many wildlife management systems have been dismantled. Even so, a reflective analysis of anecdotal reports reveals some consistent patterns:

- 1) Wildlife on most of the privately owned conservancies and game farms in the dryer areas of the country have been severely poached by a variety of people exploiting the break down of the rule of law.
- 2) The damage to Zimbabwe's wildlife heritage has not been systematically assessed due to the prevailing war-like situation on the ground, but all reports point to catastrophic losses of irreplaceable endangered species such as black rhinos and painted dogs, as well as the destruction of commercially important herds of wildlife.
- 3) The Communal Lands and National Parks have been less severely affected, but worrying reports indicate that the security of wildlife and the environment in these areas continues to deteriorate daily, and risks to animal populations in these areas are increasing due to chronic environmental problems, increasingly uninformed and irrational actions by politicians, loss of human capacity and deteriorating infrastructure.

Chronic environmental problems affecting Zimbabwe include deforestation and overgrazing, water pollution, invasive plant and animal species, uncontrolled fires, human-wildlife conflict, dams, elephant over-population and wildlife borne disease. Zimbabwe is sorely lacking the finances and expertise to systematically tackle these problems, and many of the management, mitigation and education programs in place prior to the year 2000 have stopped due to the deteriorating working conditions and the flight of conservation professionals. The prevailing situation has severely demoralised the remaining conservation professionals and educators.

RECOMMENDATIONS

- 1) *Foreign governments and agencies* should a) support and encourage access to conservation information and educational materials; b) support the prioritisation of conservation needs; c) avoid direct funding and/or antagonization of the government; d) actively praise and recognize positive actions and innovations developed by the remaining conservation-related organizations e) start small, flexible grant-programs to provide conservation opportunities and to cultivate what is left of Zimbabwe's remaining conservation skills base; f) provide tourists with balanced information about the risks and benefits of travelling to Zimbabwe, bearing in mind the crucial economic links between Zimbabwe's wildlife and its tourism industries.

- 2) *Local conservation NGO's* should a) continue to explore and implement, wherever possible, pragmatic solutions to conservation problems; b) forge local alliances and communicate lessons-learned through local forums; c) establish close contact with multi-laterals and international organisations; d) identify and prioritise the environmental problems under the current regime; e) maintain relationships with reform-minded government officials; f) keep detailed records of past and present wildlife populations.
- 3) *The Zimbabwean Government should* a) work to strengthen democratic institutions; b) resolve and land-tenure disputes in a fair, professional and legally sound manner; c) facilitate the visits of international researchers, NGO's and multilateral institutions; d) work in co-operation with neighbouring Southern African nations on transboundary conservation initiatives; e) increase funding to wildlife management and protection departments; f) reduce the population pressure in rural areas by providing incentives and opportunities that encourage rural-urban migration; g) allow foreign and local journalists free access to rural areas and National parks; h) implement constitutional reforms that protect the wildlife, environment and biodiversity found in Zimbabwe.
- 4) *Opposition parties should* a) seek to de-politicise wildlife conservation issues; b) consult with locally-based professionals and stakeholders to form a comprehensive wildlife policy and recovery plan, then use it as part of the election platform c) the shadow minister for environment and tourism should convene conservation meetings and conferences to promote internal communications and dialogue among conservation groups.

INTRODUCTION

Zimbabwe is a land defined largely by its wildlife—arguably more so than any nation on earth. For centuries, humans have been drawn to this expanse of Southern Africa for its herds of game, impressive safaris, and the charismatic representatives of the animal kingdom that await even the casual observer. Moreover, the country's breathtaking landscapes are testament to the rich natural wonders and the outstanding potential of this country, which has only been unlocked in a few high-profile areas.

Today Zimbabwe's wildlife and the environment are threatened at unprecedented levels due to the rapid social and economic changes occurring in the country due to mismanagement by its rogue government. In most countries, lawlessness is a consequence of war, revolution or some other civic breakdown – as in Ivory Coast, Liberia, Sierra Leone or Somalia. Some dictatorships use lawlessness as a means of attaining power and incorporate lawless elements into their general repressive apparatus – although sometimes purging them as the Nazis did with the SA. What makes Zimbabwe unique is that the government promoted lawlessness as a deliberate instrument of policy. Back in 2000 the country was at peace, it faced no external threat and possessed functioning (well, sort of functioning) institutions. There is absolutely no reason why land reform could not have been done in a planned, orderly and equitable way. There was no public demand for farm invasions and the government engineered the whole land crisis to eliminate political opposition. Of course, they forgot about the law of unintended consequences and now face a great number of problems that might, at some time in the future, lead to a genuine breakdown of law and order. One problem is that by encouraging lawlessness and using the police to promote it, they have lost the ability to restore order even if they wanted to.

In Africa, the only possible analogy is Idi Amin's expulsion of the Asians in the 1970s. But it differs in that Amin came to power in a military coup, itself a lawless act. The resulting changes in Zimbabwe have been extremely detrimental to the wildlife and environment but this crisis has been somewhat overlooked given the scale of the humanitarian disaster gripping the country. Information about the conservation industry is scarce and anecdotal due to the corresponding break down in many of the wildlife management systems. Unlike the recent past, when more organized systems of efficient environmental management monitored and preserved large tracts of the country's flora and fauna, Zimbabwe's current political and environmental upheaval has created its own brand of natural catastrophe that threatens lives, both animal and human.

We seek to present a current and accurate assessment of the state of wildlife, conservation and environmental management in Zimbabwe. As the situation in country becomes more aggravated, reliable information is scarce and the true state of affairs becomes elusive, and compiling this report has been 4 years in the making. Journalists continue to be personally threatened, and the curious foreigner is prohibited access to huge areas of the country. Whereas reports from the ground are politicised and incomplete, reports from abroad can lean towards the sensational. The chaos is further stoked as the Zimbabwean conservation community finds itself divided by crisis and politics. In the absence of systematically collected first-source data, this report represents a synthesis of hundreds of resources, current reports, and seeks to provide an honest and penetrating analysis of the most pressing issues affecting Zimbabwe's conservation sector.

SCOPE OF THE PROBLEM

ENVIRONMENTAL FACTORS

Through our research, we sought to identify the main environmental problems afflicting Zimbabwe, listed in degree of importance. None these problems are new to Zimbabwe and some very comprehensive baseline studies prior to the recent political upheaval exist for many of these problems. This paper does not aim to provide detailed historical accounts, but weaves together some of the most recent available reports to provide an overview and some context to the environmental challenges facing Zimbabwe.

1) Poaching - The illegal killing and consumption of Zimbabwe's animal species continues to pose the most serious threat to the future sustainability of the country's wildlife reserves and game farming activities. The lack of property rights (especially now that land has been nationalized) is a key factor compounding the loss of wild animal populations. The Parks & Wild Life Act of 1975 was an extraordinarily progressive piece of legislation and unique – certainly in Africa and perhaps elsewhere – in that wildlife became the property of the landowner, apart from a few specially protected species. However, now that land ownership is very insecure, wildlife is simply viewed by some new landowners as an asset to be stripped from the land before it is re-confiscated. Lack of reporting, lawlessness, and impunity are contributing to the unheard extermination of wildlife populations.

Three major types of poaching pervade in Zimbabwe today: *Subsistence*, *Sport*, and *Commercial*. *Subsistence poaching* reflects an opportunistic response to the combination of poverty, lack of food, and the disintegrating economy and rule of law in country. Many independent news reports affirm that thousands of rural poor cut through wire fences on conservancies and commercial farms, then use this wire to make snares to catch wild animals for food both on private land and in the bush [1, 2] (Fig 1).



Fig 1: Snares collected from a Conservancy, 2001.

Similar circumstances of poverty and desperation have led to the utter depletion of wildlife in other Sub-Saharan African countries. *Illegal sport hunters*, most of which are visitors from South Africa,

have been quick to take advantage of the breakdown in rule of law to seek the thrill of the kill or simply to harvest venison for “biltong” (a dried meat delicacy) or hides (especially zebra hides) that are then smuggled into South Africa for commercial trade [3]. Impunity and the lack of regulation have given Zimbabwe a reputation among such undesirable tourists, and they are likely to continue exploiting the shambles that the government has created around property rights. *Commercial poaching outfits* usually operate for profit in the form of bush meat and/or trophies [1, 4-7]. Such outfits tend to be politically connected and therefore allowed access to once-protected areas, and there are several reports indicating that unscrupulous South-African based safari-hunting operations are bringing ignorant or uncaring clients in to shoot trophies in unregulated situations such as game farms from which previous owners have been evicted. In connection to this rapidly evolving business venture, one hears occasional reports of “self-pillaging” by the government, including the worrying development that uniformed officials from the government and military are poaching animals in parks and on conservancies. One such case reported that army helicopters were used to transport antelope carcasses [1, 5, 8, 9], while in another incident, landmines were used to kill hippos.

These poaching reports have been fairly widespread across the game rich areas of the country in the northwest, southwest and southeast, and have concentrated on former game farms, conservancies and commercial farms. Poaching of former wildlife conservancies is much more extensive than the isolated reports from the National parks, and this was originally fuelled by the breakdown of law-and-order associated with President Mugabe’s land-reform program. Some senior government officials have actively advocated disruptions and poaching on land that was formerly privately owned as spoils of war [11, 12].

Another alarming development is incidents of poaching in national park areas and across national borders [10]. This indicates a break down in the rule of law, and a reduction in the quality of management of core protected areas, that would normally be a potential conservation safety net to restock formerly privately owned lands if and when the current land dispute is resolved. Efforts to curb poaching incidents in national parks are hindered by the constant lack of resources and on occasions, direct interference by the State [13].

Accurate monitoring of the poachers’ toll is impossible. Wildlife researchers and law enforcement are now barred from going into many former game farms and safari concessions, making any systematic appraisal impossible under the current regime. These areas often abut National parks and it is likely that they represent wildlife sinks for animals that move beyond National Park boundaries [7, 8, 14]. A few well-documented cases offer a tip-of-the-iceberg view of the situation. For example, two years ago, there were sixteen black rhinos killed in Matusadona and Hwange National Parks [15]. In light of such developments, 30 rhinos were recently re-located from high-risk game-farms to safer, more protected areas. In 2003 it is estimated that 1 in 10 of Zimbabwe’s 550 black rhinos has been lost to poachers and illegal safari hunters between and 2000-2003 [1, 15, 17]. Another high-profile case is that of the painted hunting dog where over one 18-month period, three out of five study packs of painted hunting dogs were lost to poacher’s snares [2, 18, 19].

On the demand side of the equation, the international market for illegal wildlife products is probably increasing and Zimbabwe’s warm relations with China poses a worrying development in this regard [20, 21]. China’s rising place in the global economy, along with its insatiable taste for wildlife products—mostly in connection with traditional Chinese medicine—pose a huge threat to endangered

species worldwide [17, 22]. Zimbabwe appears to be emerging as a new focus of supply and a group of Chinese nationals was recently arrested in Zimbabwe with 67 illegally procured elephant tusks [23]. The situation clearly demands closer international monitoring.

2) Deforestation and Overgrazing - Prior to the year 2000, meticulous documentation highlighted that deforestation was a major problem in Zimbabwe. Forest cover declined from 57% in 1990 to 49% in 2000, and 44% in 2005, a rate of loss over six times higher than the global average [24].²⁵ In 2000, communal lands held an average of 6.3t of indigenous wood stock per hectare, while privately owned land held three times as much, 20t/ha (reflecting sound land-management practices in the latter), while national parks held 49t/ha (reflecting the non-extractive land use in these areas) [25]. This is excellent baseline data, and a more recent analysis would be both invaluable and revealing, because sporadic reports suggest that a general practice of slash-and-burn agriculture is taking place on resettled land [26]. This particularly environmentally unfriendly method is detrimental not only to wildlife, but to the land itself and the problem stems from a demand for quick cash crop returns combined with a lack of education on proper farming techniques. In addition, free ranging cattle and goats on public and private has contributed to severe cases of overgrazing that are often irreversible.

Aside from the denuding of designated private lands, the deforestation problem is extremely pronounced in communal lands with high population pressure [27] and is a growing problem near urban areas with high population densities, frequent power cuts, and acute paraffin shortages [28]. A recent report quotes a wood seller on the outskirts of Harare:

"This is the only business I can do because I have no capital to start any other project. For this, I just need an axe" [28].

The critical shortage of fuel due to the lack of foreign currency from exports (formerly earned from the commercial farming sector) means that the average fuel consumption and CO₂ emissions declined from 1.6 tons per capita in 1990 to just 1 ton per capita in 2002, but it is unclear whether the associated increase in consumption of wood fuel has been factored into this calculation [29]. The government is exploring several imaginative alternative energy schemes [30-33], but lacks the expertise or financial resources to achieve any of them to any meaningful scale or implementation [31].

3) Pollution - Lack of governance and accountability, paired with the current survivalist mentality of the average Zimbabwean city council (and citizen), have led to severe cases of water pollution. The prime example is the Manyame River, which runs into Lake Chivero, which is Harare's main reservoir for drinking water. The municipalities of Harare, Ruwa and Chitungwiza, along with the highest concentration of industry in the country, have all been discharging—at best—very poorly treated, and at worst, completely untreated waste-water into the Manyame River and its tributaries. The resulting degradation of the river and eutrophication of the reservoir have resulted in huge fish kills, prolific growth of invasive weeds, and exorbitant water processing costs [34-37]. News reports on the issue from other parts of the country indicate that the Manyame River is not an isolated case [38, 39].

Illegal gold panning in rivers has become epidemic amongst poverty-stricken people hoping to strike it rich [15, 39-42], apart from the devastation of river beds due to digging and siltation in rivers, the mercury used by illegal gold panners is being discarded into water bodies and accumulating in fish and

higher up the food chain [43, 44]. The attitude towards panners from the government ranges from encouragement to eviction depending on the political context or simply the day of the week. [40, 45]. The resulting siltation of dams and rivers is a largely unstudied, but judging from severe gully erosion in numerous areas around the country [25, 28] one can only guess that the effects on aquatic life must be pronounced.



Fig 2: Illegal gold panners in Chimanimani National Park

4) Alien Species - Zimbabwe has a serious problem with invasive plant and animal species. Some of the most notorious plant culprits are *Lantana camara* a noxious terrestrial weed and Water hyacinth an aquatic nuisance that blankets water bodies especially if accompanied by eutrophication [34, 37, 46]. New plants are often introduced and exotic plantations established according to the whim of a minister or development group often with little or no consideration of their potential environmental impacts or invasive qualities [e.g.33, 47-49]. Zimbabwe's fish fauna have also been considerably altered through introduction of exotic predators like largemouth bass, trout and robustus bream that prey on smaller native species [50, 51], while Nile tilapia have escaped from fish farms and are possibly hybridizing with native Mossambican bream throughout the country.

5) Fires - As conservancies and commercial farms were invaded, one of the first actions of the settlers was to burn the land, to flush out game for hunting or simply as an act of arson to destroy habitat and to scare landowners off their properties [52]. In some cases, these spread to National parks, causing severe management problems for game wardens [53, 54]. While savannah ecosystems are fire-dependent to some extent, if fires are extensively lit at the wrong time of year this destroys valuable fodder for wild and domestic animals, and encourages bush-encroachment [54-56]. Recent uncontrolled fires in the Eastern Highlands have severely affected conservancies and wildlife populations, national parks and destroyed nearly 2000 ha of plantation forests [54, 57].

6) Human-Wildlife Conflict – Historically, humans have battled with wildlife in Zimbabwe and regarded wild animals as vermin, crop-raiders, livestock predators or vectors of disease [58]. A change of attitude came about in the 1960's as the aesthetic and economic values of diminishing wildlife

populations became apparent [58]. In recent years much progress has been made to reduce human-wildlife conflict with methods far more creative than simply shooting ‘problem’ animals. The conflict mitigation methods included costly investments in tsetse fly control, electric fence construction, planting of chili peppers to deter elephants and sophisticated game management with harvest quotas to keep animal numbers at optimal carrying capacity [59, 60].

In many areas around the country without sophisticated barriers or conflict mitigation measures, wild animals cause significant damage. For example, in one communal area near Hwange in 2002 elephants destroyed up to 90% of people’s crops and trampled 21 people to death [61]. However CAMPFIRE (Communal Areas Management Programme for Indigenous Resources) programs in the area that helped local communities to reap financial benefits associated with living with dangerous animals on their land primarily by selling strictly regulated quotas of animals to foreign hunters and then dividing the proceeds within the community, thus easing the economic burden of living alongside wildlife [59, 61]. If CAMPFIRE’s market for wildlife through hunting and tourism is not maintained and cultivated, then there is the risk that the cost-benefit scales will tip against the wildlife. A recent report serves to illustrate this point, as locals in Gurube are cashing in on their elephants to sell the ivory on the black market [6].

7) Dams - Zimbabwe has one of the highest densities of dams of any country on the planet, and they continue to be built (albeit at a slow rate) amid signals from the government suggesting that they strongly favour dam-construction as the solution to Zimbabwe’s agricultural woes [62, 63]. Of the 9,818 dams in Zimbabwe most occur on former commercial farmlands where they were used for irrigation of crops while only 6% of the dams occur on communal lands [64]. Dams have had a considerable impact on Zimbabwe’s biological diversity and migratory fish populations. They act as barriers to fish migration, they create artificial lake habitats where historically there were none, and they are often points of introduction of harmful invasive species of fish and plants [50].

Given the collapse of the commercial farming industry, the lack of financing for commercial and communal agriculture, and that most potential dam sites on former commercial farmlands have already been developed, the continued construction of dams in Zimbabwe is unlikely to continue to be a real threat. What is really needed is a close scientific examination of the condition of Zimbabwe’s fluvial and other wetland ecosystems, such as dambos [65]. The few remaining non-dammed rivers and unimpacted dambo ecosystems should be given protected status and research needs to be carried out into potential ways to restore the degraded systems. Older dams like Mutirikwi that are in need of maintenance should be repaired or decommissioned as they are cracking and pose flooding risks to people downstream [66].

8) Elephants – Elephants are an extremely charismatic species that have been an international conservation lightning rod; Zimbabwe today is in the unenviable position of having too many elephants - about 100,000, or 1/5th of Africa’s population [56]. These huge animals can be enormously destructive and destroy the very habitats that sustain them. Some argue that habitats are already so degraded and that game are at such high densities that some elephants are thought to have starved to death due to a lack of food and water [67]. To solve the problem and avoid the previous international criticism associated with its culling operations, the National parks is auctioning elephants off to game farmers in order to reduce the population pressure [68], but it is unclear as to whether a single elephant

has been sold under this scheme yet. It was in the context of huge ivory stockpiles from early culling operations that Zimbabwe successfully lobbied for the resumption in international trade in ivory.

The re-opening of the trade in ivory in 1997 resulted in an experimental auction to Japanese buyers that realized much lower revenues than were expected because bidders simply divided up the lots amongst themselves prior to the auction [69]. Dr. Mtsambiwa, director of Zimbabwe's National Parks service now complains of a lack of funds to manage Zimbabwe's elephant population, [70] yet he admitted that no CITES money from the ivory sales was spent directly on elephant conservation work. On the other hand, it is widely reported that the lifting of the trade ban in ivory has resulted in a boom in international ivory markets and of elephant poaching [5, 22, 71]. Zimbabwe is therefore walking a tightrope between managing its own burgeoning elephant population and other countries where the viability of their small elephant populations is threatened by poaching. It is clear that Zimbabwe needs to adopt a careful, responsible and scientifically rigorous management program that results in secure, but manageable elephant numbers not just in Zimbabwe, but further afield.

9) Wildlife-Borne Disease – As settlers moved onto conservancies, they systematically ripped down game fences, letting game animals out into areas with domestic livestock. Several hundred head of cattle have also died of theileriosis which spread from buffalo to cattle by ticks, but the situation appears to have stabilised [11]. According to veterinarians, the current scenario has resulted in foot-and-mouth disease outbreaks [11]. The FAO has donated thousands of vaccine doses, but their application is of limited use where controls of cattle movements have been broken down. The risk of a foot and mouth disease over the last few years has also made the government of Botswana twitchy enough to have erected an electric fence along the Zimbabwe border to prevent any Zimbabwean disease outbreaks from wrecking their valuable cattle industry. However, critics have speculated that keeping Zimbabwean refugees out is an added, and possibly a more desirable benefit than disease control [72]. Anthrax is another potential threat, and in 2004 an outbreak in the Save valley killed over 1500 animals but was contained by the landowner and veterinary experts [73]. The most recent outbreak in Masvingo has killed 3 people and 130 cattle [74].

LAND TENURE

There are three main types of land tenure in Zimbabwe – privately owned, communally owned, and national parks land. The privately owned land has been the epicentre of Zimbabwe’s current crisis and has undergone severe changes in recent years, while the other two systems have been affected indirectly as a result of the breakdown of the rule of law and the commercial farming sector that was Zimbabwe’s economic backbone prior to 2000.

1) Private Land – In 2000, commercial farmers (mainly white) owned slightly over 8 million ha of land (21% Zimbabwe’s land area) under a free-hold land tenure system used to grant the owner full, perpetual rights over their land [25]. Landowners, as in much of the developed world were able to use their title deeds as collateral to obtain loans from banks in order to develop their commercial enterprises. This system was so successful that Zimbabwe produced food for export throughout the SADC region, supplied 10% of Europe’s horticultural imports and was the world’s second largest tobacco producer. From a conservation perspective, these lands had much the same environmental issues as commercial farms everywhere else in the world. Skilled professionals with university degrees usually tackled these problems and had access to capital and could manage their land according to best practices. Land ownership provided a real incentive to carefully manage land for long-term sustainability [25]. Some of the environmental problems associated with private lands included: over-use of pesticides and fertilizers, dam construction, invasive species, forest clearance for agriculture and water pollution resulting from concentrated livestock operations.

What was particularly interesting from a conservation perspective was the growing popularity of wildlife farming and ranching, which satisfied the twin aims of biodiversity conservation and profit. Research showed that it was more profitable to farm wildlife than cattle in drier regions receiving rainfall below 750mm/year [59]. By 1995, the wildlife producer’s association had 351 members with over 250,600 head of game [75].

Private land tenure is now a quagmire with land being grabbed by peasants who were incited, or in some cases paid, to do so by politicians [76]. This land was re-grabbed by the politicians and traded between Zanu PF officials, police and army officials depending on whose in favour that particular day [77-79], but the land itself is an asset that proves very difficult to liquidate, especially under the current circumstances.

Wildlife farms and game conservancies were no more spared: In 2002, just 2 years into the “fast-track land reform” the chairman of the wildlife producer’s association remarked “*It is estimated conservatively that we have lost about 50% of our wildlife, 65% of our tourism in the country and up to 90% safari hunting on commercial farms, and a huge reduction in capture and translocations of wildlife on conservancies*” [75]. All reports to the police of random individuals driving onto former game farms and shooting were ignored by the police, resulting in a war zone [12, 75] on privately owned land where whole fences have been turned into thousands of snares killing thousands of animals, particularly in Matabeleland South and Mashonaland West [75]. Records maintained from just 14 farms that were not declared “no-go areas” in the Save Conservancy indicate that between 2001 and 2002, 1150 animal carcasses were recovered from snares representing a trophy value of US\$656,000 [80] (Fig 3a). The illegal settlers were overtly hostile and threatening towards tourists with cameras as they did not want to appear in any photographic records [4]. 22% of the Save Conservancy is now occupied by illegal settlers, 80km of perimeter fence have been removed and

there are 5000 cattle living in the conservancy where they are coming into contact with buffalo that are infected with foot and mouth disease [81].



Fig 3a: Eland trapped in a wire snare

Recently, the government declared through the State-owned newspaper that illegal settlers in the Save Valley, Gwayi, Bubi, Buby Bibiana, Bubiana, Dete and Hwange Conservancies were degrading the vegetation and decimating the wildlife, that they would be removed and that the land would continue to be run as conservancies [12, 57, 82] (Fig 3b). However, along with much of the other rhetoric associated with land reform, no constructive action taken because the government is sorely lacking the resources, expertise and will-power.



Fig 3b: Slash and burn agriculture on a conservancy, 2004.

2) Communal Land – 42% of Zimbabwe's land surface is occupied by 66% of its population under a system where the State President grants usufruct rights to villagers and chiefs. There is no legal security of land tenure and title deeds do not exist thus farming occurs mostly at a subsistence level,

resulting in only minimal reinvestment in the land and an absence of economies of scale. Because of their high population pressure, communal lands are severely degraded from an environmental perspective, the most common problems being severe deforestation compounded by chronic overgrazing and erosion. The resulting desertification on communal lands is clearly visible from satellite images, often following fence-lines rather than underlying geology [27] (Fig 4, next page).

Despite the prevalence of these environmental problems, some Communal areas had fairly significant game populations and hunting was strictly controlled by the state with any proceeds being channelled to the central government until the formation of CAMPFIRE – (Communal Areas Management Programme for Indigenous Resources). CAMPFIRE was a radical change in policy because it recognized that local communities should benefit directly from the wildlife resources on their land, in so doing, they develop a sense of ownership and custodianship over their wildlife. This year, CAMPFIRE hunting revenues amounted to Z\$5 billion (US\$3 million), which is nearly 10% of all hunting revenue generated in the 2005 hunting-season. Over 50% of the revenue was disbursed back to the communities where the revenue was generated [83-85]. Sight-seeing, as opposed to hunting has long been coveted as an area for CAMPFIRE to diversify into so that it can expand its revenue base [83], but this remains unlikely given that Zimbabwe is perceived abroad as a politically unstable and dangerous destination for people with fair complexions.

Communal lands have traditionally been very poor, environmentally degraded areas due to the high human and livestock population densities and it is uncertain whether the land reform programme will result in any real benefits to communal landscapes, even though one of the government's reasons for justifying the land confiscation was that they wanted to reduce population pressure in communally owned areas. Historically, some private conservancies have provided technical support, management skills and land to surrounding CAMPFIRE areas, but since the demise of the private landowners many of their skilled wildlife professionals have moved elsewhere [86].

3) National Parks - 15% of the country is classified as protected land in the form of National Parks, Safari Areas and Forest Reserves. They had established a reputation as some of the best-managed parks in the world, run by highly trained, professional staff [59, 87]. National Parks and Forests have apparently escaped relatively unscathed in the recent upheaval [1, 88], but some have periodically been target of opportunism and illegal hunting or wood harvesting [89].

The bankruptcy of the State has severely affected the work of those people that have been trying to maintain some state of normalcy in the National Parks systems who acutely need equipment, such as vehicles for anti-poaching operations and fuel to run the pumps that keep waterholes filled [1, 13]. Technologically, the National Parks system has been left in the 1980's as the staff members have limited computer access and most records and report and accounting systems are hand-written. The Zimbabwe National Parks Authority does not host a website.

Of all the National Parks, settlers have so far invaded only Gonarezhou, claiming historical rights to about 11,000ha [11]. A regional governor has actively encouraged their actions, but the Minister of the Environment simply denies that the settlers exist [11]. The Great-Limpopo Trans-Frontier Park has

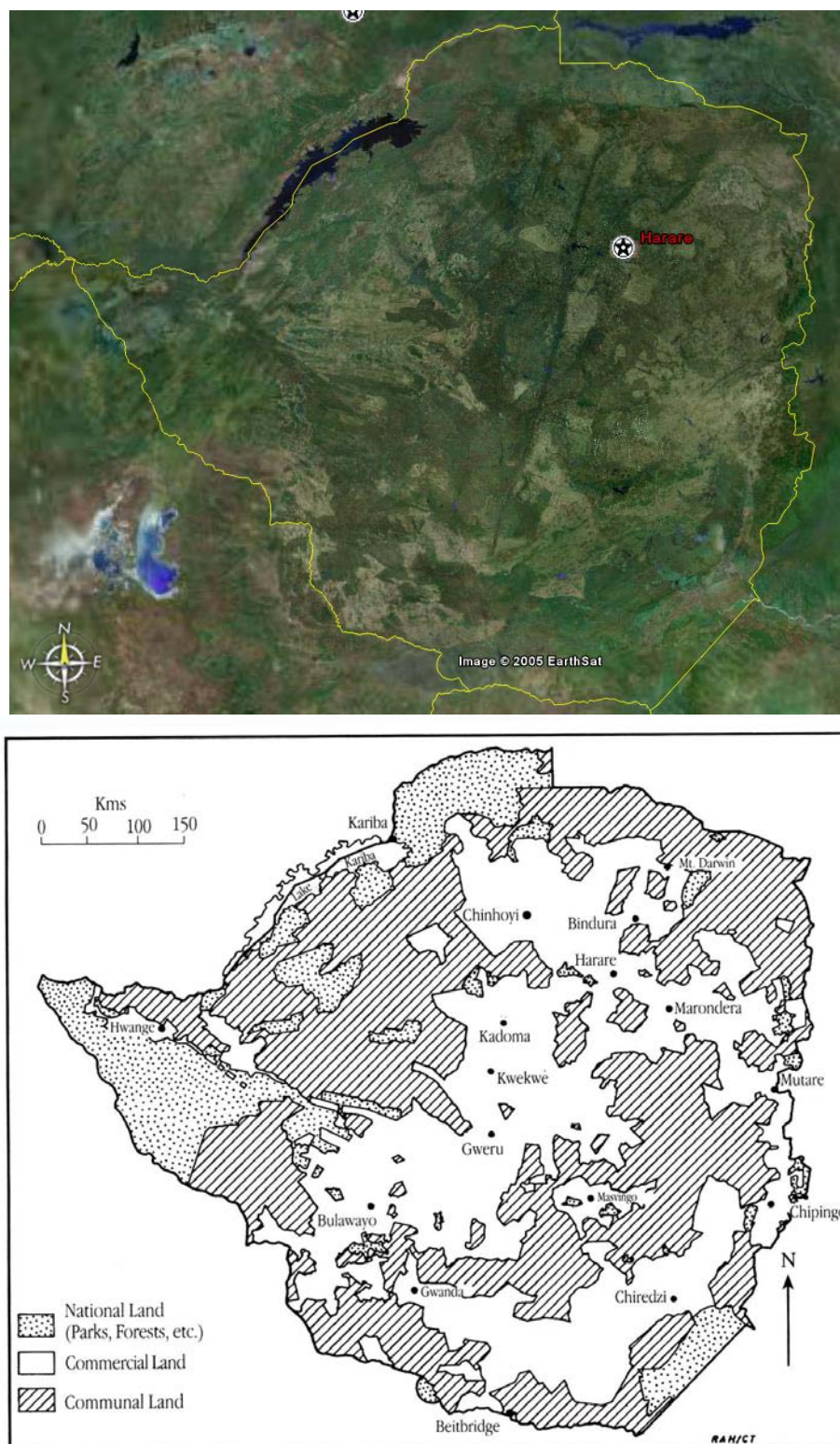


Figure 4: A satellite image of Zimbabwe [90] (above) juxtaposed with a land classification map [59] (below). Note the scarred appearance of the communal land.

come under intense criticism due to these land-invasions, the break down in rule of law, and the poaching reports from the surrounding conservancies that were supposed to be a part of the larger park [8, 91, 92]. Donors have been very wary of giving money to Zimbabwe as there is limited accountability for funds that get sent through the Zimbabwean government, however the authorities seem to have found a loophole in a NEPAD funding agreement and have now declared that the park belongs to SADC. According to this logic, that Zimbabwe can access the fund even though its appalling governance record forbids this [92, 93]. Zanu-PF, with considerable support from neighbouring governments continues to bury its head in the sand and routinely denies that there are any environmental problems, or land invasions, affecting the park—despite numerous reports and photographic evidence to the contrary [94-96]. This messaging war only achieves a mood of unhealthy uncertainty, deterring tourists and resulting in the non-resolution of issues raised over four years ago and the daily deterioration of the situation on the ground.

Wildlife and safari areas continue to be administered by the government and foreign (mostly American) hunters have not been deterred by the political upheaval in the same way that other tourists have, the parks management authorities report that hunting revenues have remained fairly consistent over the last few years with Z\$60 billion being realized in the 2005 hunting season [24].

WORKING UNDER A TOTALITARIAN REGIME

This section lists some of the more pressing problems of day-to-day life in Zimbabwe, where survival comes first, and conservation slips to the bottom of the priority list.

1) Keeping Your Mouth Shut – It is increasingly difficult to find out very basic information in Zimbabwe because most people are too scared to speak on the record for fear of reprisals from the government [1]. One of the best survival strategies in Zimbabwe is simply not to draw any attention to oneself because any voice of dissent is simply crushed. For example: 4,000 commercial farmers had their land confiscated [98], 750,000 urban dwellers were bulldozed out of their homes [99], opposition party members are routinely arrested detained and tortured [100], and constituencies that vote the wrong way are denied food aid [101]. The one thing they all had in common was voicing dissent towards Zanu PF. The lesson learned here is that if you can't sing praises about the government; just keep your mouth shut.

2) Fuel and Energy Crisis – It is extremely difficult to get anything done in a country without fuel. Zimbabwe has endured a 5-year long fuel crisis [102] that began right about the time the government decided to flush the economy down the drain. This will inevitably have negative consequences for wildlife, as it is almost impossible to perform the simplest duties or to keep regular patrol routes, research sampling, water pumps or tour vehicles running [103]. Ironically, the situation does present some potentially positive benefits as the government is apparently embarking on a series of very imaginative alternative fuel schemes such as bio-diesel [33], biogas [32], ethanol [30], and methane [31], but lacks the expertise and financial resources to seriously develop any of them.

3) Corruption - Zimbabwe ranks 114th out of 146 countries surveyed in Transparency International's corruption perceptions index [104]. The country's descent into the current corruption vortex began long before its accelerated land reform program but slipped markedly after the year 2000 and has become a system with a rampant disregard for ethics [104]. This translates indirectly and directly to environmental issues, but we'll list a few recent allegations to give a fairly superficial glimpse of how corrupt practices may affect the environment:

- The tender process around the Kunzvi Dam being built by the Chinese was very shady [63].
- Game wardens have been selling the water pumps donated to National parks by conservation groups [5].
- Vitalis Chadenga, the operations director Parks and Wildlife Management Authority was suspended following investigations into the theft and translocation of live game and the improper issuing of permits then re-instated due to a 'lack of evidence'.
- Some game conservancies were confiscated and distributed to favoured, politically connected individuals [77, 106].
- Mugabe has been granted logging rights in the Democratic Republic of Congo in exchange for troops [107].

4) Hyperinflation - The term sounds so quaint, yet it has incalculable consequences for a country in which inflation rates sometimes exceed 600% [108]. Daily existence becomes virtually impossible as savings and salaries erode daily, virtually forcing people into illegal activities and/or subsistence farming simply to survive. Apart from these fairly self-evident problems, there are also more subtle repercussions because the Zimbabwean government does what it does best and simply denies that inflation exists. Thus fines for environmental crimes, prices for boat licenses and entry to national

parks become out-dated within hours of being revised. Foreign tourists, however, can't take advantage of this phenomenon because they've been required to pay for most things in foreign currency for a number of years now. Another annoying aspect of hyperinflation for Zimbabwe-watchers is that the Zimbabwe dollar is now a meaningless economic indicator and Zimbabwean journalists simply can't be weaned off them. For example, hunting revenues generated Z\$ 60 billion in 2005 [24] – this really means very little unless you have a written record of the black-market exchange rates for that particular date, and the whole purpose of the black-market is its informal nature, which brings us to the next point.

5) Lack of Foreign Currency - foreign exchange rules vary enormously depending on who you are. For example, on October 18, 2005 an NGO, tobacco farmer or tourist exchanging money at a bank could get just Z\$824 for each US\$; a businessman needing foreign currency for a business trip could with some luck and political connections buy one US\$ for Z\$26,000 through an auction system run by the Reserve bank; important ministers that get to buy foreign currency at Z\$26,000 to one have been known to sell it at much higher black-market rates - the most recent report is Z\$ 70,000 for each US\$ [109]. Thus, the Zimbabwean dollar has thus ceased to be a meaningful economic indicator yet the government strictly enforces its continued use, making life rather difficult and traumatic for any businesses, NGO's and tourist outfits in Zimbabwe that deal in foreign currency, because they basically have to operate illegally if they want to continue to exist.

6) Brain Drain – Between 3 and 4.5 million Zimbabweans are estimated to be living abroad, primarily in South Africa, Botswana and Britain [110, 111]. The reasons for this exodus have been: 70% unemployment [112], poor salaries, concerns for personal safety, poor exchange rates, bleak future prospects for one's children and a straightforward lack of professional opportunities. A survey of half a million professionals in the Zimbabwean diaspora indicated that most of them had university degrees and 25% had Masters or PhD level degrees. The conservation and wildlife management industry has lost a significant number of the important researchers and conservationists that founded the excellent research and management systems [87]. These highly valued skills are very transferable within Africa and abroad and Zimbabwean conservationists have taken advantage of this fact, many of them now continue their work in far-flung reaches of the globe.

7) Education – The expansion of the education sector in Zimbabwe since 1980 has often been characterised as one of the major achievements of the post-independence government. In 1979 about 800,000 children attended primary school while almost 2.3 million attended in 1989. Unfortunately, Zimbabwe's once excellent education system is under siege mostly due to the economic crisis and the government's prohibition of increasing school fees, despite hyperinflation [24]. Under the current economic scenario, schools may continue to operate, but simply cannot provide the services that a school should be providing. The government also actively meddles in the affairs of private educational institutions, trying to set them on the same ruinous path as their government-run counterparts. Environmental education components are usually taught in schools as part of the geography and the biology syllabi, but environmental NGO's have a long and accomplished history of spearheading efforts to get environmental messages out to students (See Appendix 2). The need for these supplementary teaching activities has never been greater and the NGO's continue to do good work, but many of them have real viability concerns and are trying desperately to stay afloat in these turbulent circumstances with severely demoralized staff.

8) Wilful ignorance - There have been an increasingly worrying barrage of ludicrous statements coming from the government over the last five years. Take this quote from the Zanu PF homepage. It explains why destroying one's natural heritage is an every day part and parcel of progress...

"When God created heaven and earth, and gave to each race its own corner of the land to inhabit, He did not allow others to destroy their own share of heritage so that they could move over and claim the shares of others. In England He created the Bear, Hedgehog, Fox, Unicorn and many others for the Barbarian, Anglo-Saxon, Scottish, Welsh and Irish to feast on with their eyes and quench their appetites." [113].

Another clanger comes from the state-owned newspaper widely seen as the government's mouthpiece the Herald who claim that the US and the UK were causing a drought in Zimbabwe with cyber climate nano-technology

"Those countries that submit to the caprices of the westerners automatically receive the seal of approval as "democratic" nations which qualifies them to get massive aid support and debt cancellation. With Zimbabwe fast emerging as the possible epicentre of the furtive weather modification programme that is meant to break its agricultural backbone; the world could be entering a new phase of cyber imperialism." [114]

Clearly the Zimbabwean government cannot be held responsible for the paranoia of a Zimbabwean journalist who reads American conspiracy theory blogs and treats them as legitimate news sources, however, these sorts of paranoid outbursts are routinely spouted by Mugabe and his ministers in non-conservation related arenas.

One thing that Mugabe's ministers have been very effectively communicating is that the economic crisis is due to drought, rather than land reform—even though the government's own rainfall records over the last 5 years indicate fairly unremarkable deviations from the rainfall norm since 1999 [115]. A key problem frustrating Zimbabwean researchers is that crucial statistics such as rainfall figures, food production figures and election results can be directly or indirectly concocted by the President's office and any figures coming from government departments should be interpreted very cautiously. One can learn from Stalin's Russia and Mao Zedong's great leap forward, that such delusional dictators inevitably place their countries of courses that have catastrophic environmental and humanitarian consequences and they can only recover when those errant leaders are removed from power.

9) Tourism Industry as a Whole - According to the World Tourism Council, tourism has the potential to contribute up to 12% of Zimbabwe's GDP [116]. In 2001, tourism was worth 6% of the GDP [117] but declined to just 2% of the GDP in 2004 [116]. Zimbabwe's tourist industry is inextricably linked with its rich wildlife heritage, which is the main attraction to a relatively high-end tourist market [59]. Revenues generated from wildlife tourism have been very important, providing significant economic incentives to conserve wildlife and once provided job security for 200,000 people in rural backwaters of Zimbabwe [117].

Significant declines in overseas tourist arrivals (Fig 5) have led to the demise of many tourism operations, loss of jobs and hotels and Safari companies are barely surviving from year to year with

reduced occupancy rates and skeleton staff. Sensible tourists can still enjoy a remarkably inexpensive, and safe holiday, and see Zimbabwe's spectacular wildlife [118], but it is now perceived as a dangerous off the beaten path destination for adventurous tourists.

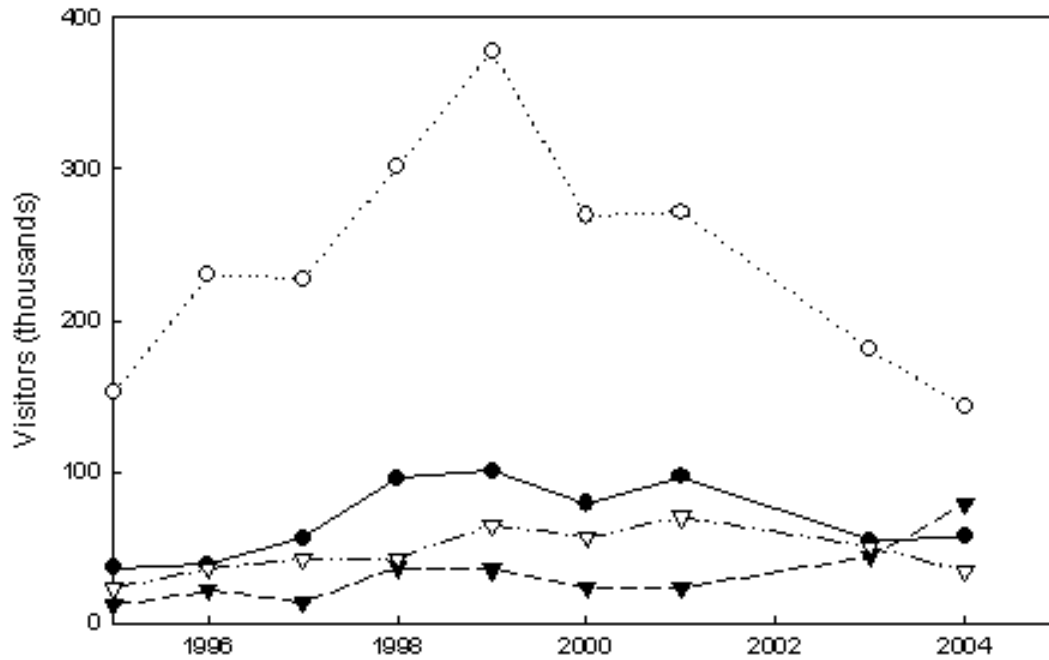


Figure 5: Foreign visitor arrivals between 1995 and 2004. ○ = Europe, ● = USA & Canada, ▽ = Australia & New Zealand, ▼ = Asia. Data Source: Zimbabwe Tourism Authority website <http://www.zimbabwetourism.co.zw> . Data points for 2001-2004 were adjusted using a correction factor of 1.32 to compensate for the fact that data points as those years are only quoted for the periods January-September.

The Government attributes the drop in tourism to the following factors:

- Continued negative publicity overseas and lack of money to counter the negative publicity.
- Decline in travellers going to long-haul destinations due to the September 11 attack in America and continued terrorism threats.
- Lack of direct flights from major markets.

The real reasons for the continued decline in tourists visiting Zimbabwe are likely to be due to the following:

- Travel warnings issued by the US Department of State [26].
- Concern over the political instability and lack of rule of law associated with land seizures [119].
- Risk of being confused with illegally operating, under-cover journalists [4].
- Fear of election violence during election periods [60].
- Chronic fuel shortages [53].
- Reports of tourists being harassed by war veterans [117].
- Reports of tourists being killed in robbery incidents [120].
- Reports of government-sanctioned hunting in game reserves [5].
- A wide choice of safer destinations offering similar tourism experiences [121].
- Tourists also have mixed feelings about visiting the “Outpost of Tyranny” [122], and an online survey by ZimConservation revealed that about half of all people surveyed (47%) felt it would be ethical to visit Zimbabwe in it’s current state, but the other half felt that it was either unethical (33%), or did not know (19%) [123].

The reserve bank is also worried about the decline in tourism receipts, but maintains that hotels are fixing their books to reflect low occupancy rates so that they can dodge taxes and sell their foreign currency earnings at high black market rates [124] (Fig 6). The Zimbabwe Tourism Authority suggests a different reason: “Though the figure for those who were in Zimbabwe for holiday and business is quite high, the majority of them, about 69%, were staying with their friends and relatives as evidenced by the low bed occupancy rates in hotels and lodges [26-31% in 2004 compared to 61% in 1999] in Zimbabwe.” [125]. The logical deduction from this is that most of Zimbabwe’s current tourism market is made up of exiled Zimbabweans coming home for the holidays. Even though 2005 figures are not yet available, initial trends indicate that a decline in tourism receipts of 8% is anticipated since the previous year [92], despite Miss World contest that was supposedly going to rescue Zimbabwe’s tourism industry [126]. Another much-touted rescue package is the government’s “look east policy”, but a cursory examination of the numbers shows that Asian arrivals have increased markedly, but the total numbers remain insignificant (Fig 5). Tour operators have also been complaining that the Asian’s are demanding (and getting) rates at roughly half the rate that a European client would pay [116]. Regional travellers came to Zimbabwe for many reasons other than tourism and the data should be interpreted cautiously, for example the huge spike in Zambian visitors 2001-2002 (Fig 7) is because Zambians would come in to Zimbabwe to fill up their fuel tanks paying for it with cheap Zimbabwean dollars bought on the black market, then go home and sell the fuel for US dollars at a huge profit.

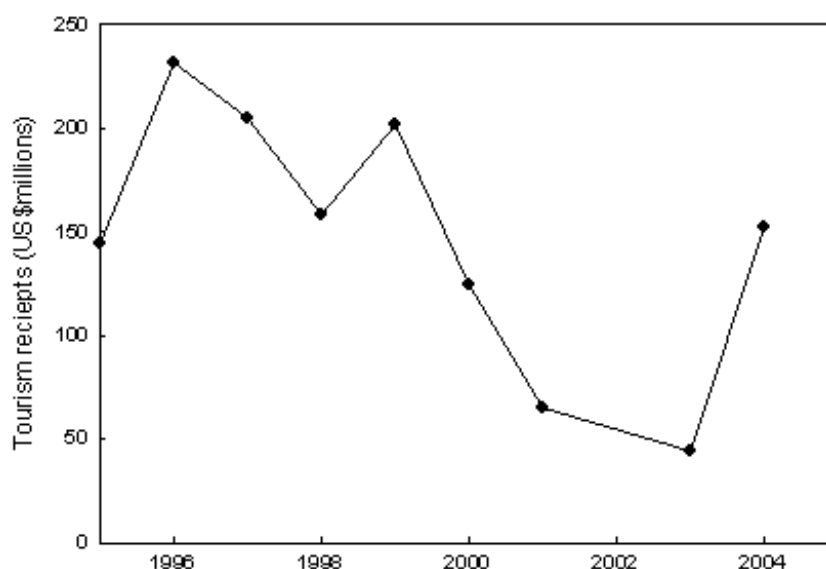


Figure 6: Tourism receipts in US\$ 1995-2004. Data Source: Zimbabwe Tourism Authority website <http://www.zimbabwetourism.co.zw>. The sharp increase in 2004 is apparently attributable to “The strict measures taken by the Reserve Bank of Zimbabwe to curb the parallel market suppressed this informal market and encouraged visitors to change their foreign currency through Authorized Dealers, a situation that was not prevailing in 2003 resulting in earnings not being accounted for in the formal market.” [125].

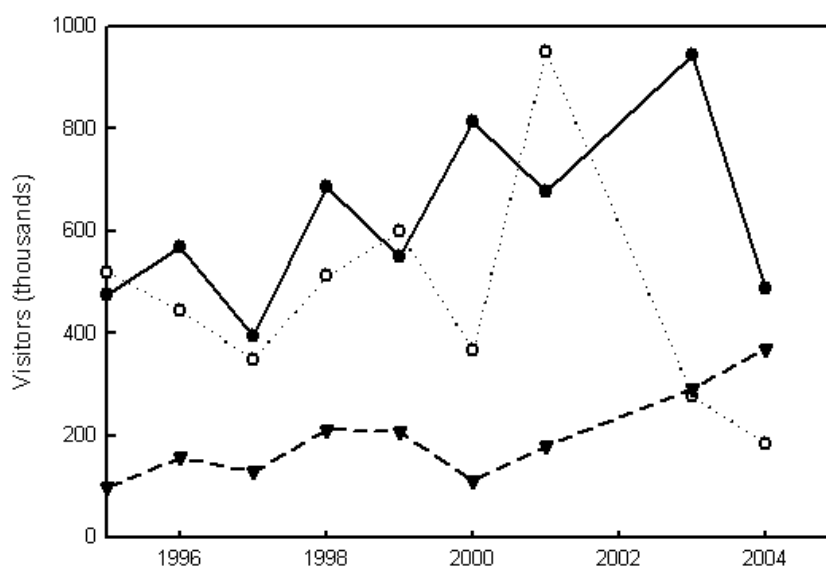


Figure 7: Regional visitor arrivals between 1995 and 2004. ○ = Zambia ● = South Africa, ▼ = Mozambique. Data Source: Zimbabwe Tourism Authority website <http://www.zimbabwetourism.co.zw>. Data points for 2001-2004 were adjusted using a correction factor of 1.32 to compensate for the fact that data points as those years are only available January-September.

10) Hunting – Apparently the numbers of hunts authorized in safari areas has remained fairly consistent in recent years and in 2003 hunting generated US\$24 million earned mostly from American hunters, including a United States Senator [127]. Mr. Charles Jonga of CAMPFIRE is on record saying that “There has been a few cancellations but they have not really made a significant negative impact on the hunting sector” [84]. And a brief look at the African Hunter web forum indicates that on the whole hunters felt that Zimbabwe remained a top-quality hunting destination with good guides, good infrastructure and very inexpensive trophies [128]. However, the revenues declared by safari operators declined from \$24 million to US\$13 million in one year prompting a back-lash from the reserve bank [129]. It is also worth noting here that any trophies hunted on former commercial farms have apparently been denied importation permits back to the US because the US Fish and Wildlife Service regards them as stolen property [130].

11) HIV- It is estimated that 1 in 5 Zimbabweans is HIV positive – this is an epidemic that will lead to rapid demographic changes over the next 10 years [131]. Life expectancy has dropped from 56 years in 1975 to just 33 years [132]. The high mortality rate amongst the sexually active population aside from creating a hugely unbalanced dependency ratio and associated social problems, it is also leading to an acute loss of skilled wildlife managers in the National parks system.

12) Lack of Research – there is a growing gap in research programs in Zimbabwe – conservation groups that have excellent baseline data have lost local skills through the brain-drain and many foreign-based researchers have abandoned their Zimbabwe projects, taking their funding elsewhere. As whole areas of the country have become no-go areas and the government has outlawed foreign reporters and cracked down on foreign NGO activity it is impossible to actually calculate the losses of wildlife given the situation on the ground, but some reports estimate 50-80% loss in large game from some areas [15]. The government’s monopoly over the media and grip on power depend on massaging wars, lack of facts, lack of synthesis, lack of vision and fear, they seem to have very effectively undermined any attempts to systematically take stock of the Zimbabwe situation since 2000 leaving Zimbabwe flailing like a rudderless ship in stormy seas.

RECOMMENDATIONS TO FOREIGN GOVERNMENTS AND AGENCIES

- a) **Support and encourage access to information** and the independent media by conservation professionals as well as attendance of conservation meetings, conferences and other communication forums. This will serve as an important morale-building tool.
- b) **Support the prioritisation of conservation needs** and actions and develop a vision for the future by bringing together the Zimbabwean Conservation Professional Diaspora, remaining local professionals and regional experts. Some obvious priorities would be wildlife monitoring and inventories as well as comparative land-use studies in the context of the land reform program to take stock of what has been lost and lessons learned. There is a risk that if this step is not taken, when investment returns, foreign consultants without on-the ground experience may not fully comprehend or understand the context of the hard lessons learned over the last 10 years.
- c) **Avoid directly funding government** departments at any meaningful level unless they have a proven track record that withstands rigorous third-party evaluation. Some individuals within government institutions have proven track records of delivering results with comparatively high levels of transparency and an ability to operate within the constraints of the existing system, but are among the minority.
- d) **Don't antagonize the government**, in the prevailing climate one cannot risk pitting politicians against wildlife. Conservationists and ecologists working in the country should focus on finding imaginative solutions to active, hands-on wildlife management and should continue use field-gathered information to inform policy. Encourage strategic hands-on actions in combination with a low profile, consistent and professional image.
- e) **Actively praise and recognize positive actions** and innovations developed by the remaining conservation-related organizations on the ground to build morale and to recognise the heroic extent of their continued actions even under these extremely adverse circumstances.
- f) **Start small flexible grant-programs** to Zimbabwean conservation NGO's encourage them to stay abreast of the changing rules and to cooperate and collaborate with government personnel wherever possible. Provide opportunities and further training to the newly qualified Zimbabwean wildlife ecologists and wildlife management personnel. Provide funding and career opportunities to existing wildlife management professionals in their capacity as individuals accompanied by with reasonable financial allowances that will allow them to meet their responsibilities to their families in an hyper-inflationary environment. Education to fill knowledge gaps will be essential and publication of conservation field guides and management guides in local languages and providing access to information would be invaluable.
- g) **Don't discourage tourists**, they are eyes and ears of the world and provide a limited but important revenue stream for knowledgeable game guides and tourist resorts. Tourists and their foreign currency provide the government with an important incentive to continue running National Parks. Small revenue streams that keep these parks running are essential to maintain existing infrastructure, so that recovery would be a less painful process when the political scene changes. Tourists should have access to balanced information about the risks and benefits of travel to Zimbabwe so that they can make an informed decision about travelling there.

RECOMMENDATIONS TO LOCAL CONSERVATION NGO's

- a) **Continue to explore and implement**, wherever possible, pragmatic solutions to the new conservation problems arising in the volatile political landscape using adaptive management principles and seek new revenue streams from wildlife and conservation.
- b) **Forge local alliances** and communicate lessons-learned through local forums and coordinate actions so that they compliment each other in different areas to achieve maximum environmental benefit.
- c) **Establish close contact with multi-laterals and international organisations** and communicate your needs with carefully researched, systematic messaging. Use teamwork and alliances to communicate realistic goals and objectives that can be evaluated in short time frames to foreign donors.
- d) **Identify and prioritise the environmental problems under the current regime** and design conservation interventions that tackle them directly.
- e) **Maintain relationships with reform-minded government officials** and communicate the importance of environmental sustainability and the potential of sound wildlife management principles to as a part of a long-term solution to Zimbabwe's current economic crisis.
- F) **Keep detailed records of past and present wildlife populations**, threats, and individuals who flout the law (ZimConservation is happy to assist in any way to maintain a transparent, web-based and accessible record for the future and to accept confidential reports).

RECOMMENDATIONS TO THE ZIMBABWE GOVERNMENT

- a) **Work to strengthen democratic institutions** such as freedom of speech, independent media, independent judiciary, free and fair elections, protection of minority rights, impartial security forces, increased political competition, respect for civil and political freedoms and progressive implementation of greater equality.
- b) **Resolve and land-tenure disputes in a fair, professional and legally sound manner** and work to secure private property rights and title deeds for those living in communally owned lands. Establish a land-reform policy that promotes sustainable use of the environment and ownership of wildlife.
- c) **Facilitate the visits of international researchers, NGO's and multilateral institutions** on condition that they share their findings to relevant government departments. Evaluate the reports carefully both on methodology and findings be prepared to implement recommendations that will secure the nation's wildlife heritage for future generations of Zimbabweans and encourage transfer of skills to build depleted local capacity.
- d) **Work in co-operation with neighbouring Southern African nations on transboundary conservation initiatives** and take extraordinary measures to ensure sustainable management of the wildlife and activities of people in these areas. Immediately take steps resolve long-standing issues such as the illegal settlements in Gonarezhou, and illegal land occupations in conservancies on the border of these parks.
- e) **Increase funding to wildlife management and protection departments** so that they have the funds and equipment to perform their duties effectively and increase real salaries in order to reduce the brain drain to neighbouring countries.
- f) **Reduce the population pressure in rural areas** by providing incentives and opportunities that encourage rural-urban migration.
- g) **Allow foreign and local journalists free access to rural areas and National parks,** encourage them to investigate and report on their travel experiences in their home newspapers to encourage foreign tourists to visit Zimbabwe.
- h) **Implement constitutional reforms that protect the wildlife, environment and biodiversity found in Zimbabwe.**

RECOMMENDATIONS TO ZIMBABWEAN OPPOSITION PARTIES

- a) **Seek to de-politicise wildlife conservation issues** we cannot afford to pit the government against the wildlife, wildlife is a valuable natural heritage for all Zimbabweans, and this is something all parties should agree on.
- b) **Consult with locally-based professionals and stakeholders to form a comprehensive wildlife policy and recovery plan, then use it as part of the election platform** this is an important issue to all Zimbabweans and they deserve to know how the party they are voting for will act in the interests of Zimbabwe's natural resources and wildlife heritage. In order to complete this plan, a comprehensive investigation of the current wildlife crisis should be conducted.
- c) **The shadow minister for environment and tourism should convene conservation meetings and conferences to promote internal communications and dialogue among conservation groups** as a non-conservation professional the shadow minister should be actively educating himself on wildlife and conservation issues so that he can be well-versed to take up the reins should the opposition party win power.

REFERENCES

1. Wines, M., *Unholy slaughter*, in *New York Times*. 23 October 2003.
2. Prescott, M., *Snare Wire Art weblog*, in *EarthInfo (UK)*. 15 March 2005.
3. Gosling, M., *SA hunters on 'wildlife killing spree' in Zimbabwe*, in *Cape Times*. 20 August 2004.
4. Nkweta, Z., *Killing Fields*, in *Carte Blanche*. 4 August 2002.
5. Munnion, C., *Tourists flee park elephants slaughter*, in *The Daily Telegraph (UK)*. 23 March 2005.
6. Anon, *14 Ivory Tusks Recovered in Gokwe*, in *The Herald (Harare)*. 22 August 2005.
7. Anon, *Wildlife sanctuary now a hunting ground*, in *The Daily Telegraph (UK)*. 14 August 2004.
8. Anon, *Will Zimbabwe become a wildlife sink for the Great Limpopo Peace Park?*, in *ZimConservation Synthesis Report* 2004.
9. Anon, *Landmines used to kill hippos*, in *Zimbabwe Conservation Task Force Report*. 17 June 2004.
10. Anon, *Poachers invade Tuli Block*, in *Daily News (Botswana)*. 2 June 2005.
11. Sharman, J., *Invasions threaten peace park*, in *Mail & Guardian (SA)*. 1 November 2001.
12. Ferrett, G., *Zimbabwe in poaching crisis*, in *BBC*. 11 September 2000.
13. Matope, T., *Parks Authority Needs 120 Vehicles*, in *The Herald (Harare)*. 28 July 2005.
14. Pincott, S., *He was named "Future"*, in *'Presidential Elephant' Conservation Project, Hwange Estate, Zimbabwe*. 15 September 2005.
15. Anon, *New commercial poaching pressures Zimbabwe's rhinos*, in *WWF*. 25 August 2003.
16. Anon, *Zimbabwe moves rhinos from poachers' zone - report*, in *Reuters*. 5 October 2005.
17. Brown, P., *Fears for rhino as hunters are allowed to kill again*, in *The Guardian*. 5 October 2004.
18. Johwa, W., *Endangered Wild Dogs Caught in Poaching Stampede*, in *IPS*. 3 September 2003.
19. Anon, *Tragedy Strikes the African Painted Dog Project in Zimbabwe*, in *David Shepherd Foundation*. 7 August 2003.
20. Anon, *Zimbabwe turns on the charm for Chinese tourists*, in *AFP*. 16 June 2004.
21. Anon, *Zimbabwe: Taxi Drivers Roped-in to Boost Tourism*, in *UN Integrated Regional Information Networks*. 31 May 2005.
22. Murphy, Z., *Europe is 'fuelling ivory trade'*, in *BBC News*. 28 September 2005.
23. Anon, *Record Bail for Chinese*, in *The Herald (Harare)*. 28 July 2005.
24. Anon, *Zimbabwe to bring steam trains back into use*, in *The Cape Times (SA)*. 29 September 2005.
25. Shumba, E., *Forestry Outlook Studies in Africa (FOSA) - ZIMBABWE*, in *FOSA* 2001.
26. Matikinye, R., *State Fiddles As Land Disaster Unfolds*, in *Zimbabwe Independent (Harare)*. January 14 2005.
27. Chigwerewe, S.K., *Agro-Forestry: Answer to Deforestation*, in *The Herald (Harare)*. September 17 2004.
28. Chimhete, C., *Threat to Harare's Ecosystem*, in *The Herald (Harare)*. 19 September 2005.
29. Center, C.D.I.A., *UN statistics database*, in <http://unstats.org> 2005.
30. Maponga, G., *Bid to Revive Ethanol Plant*, in *The Herald (Harare)*. 21 September 2005.
31. Anon, *Hwange to Explore Methane Gas*, in *The Herald (Harare)*. September 27 2005.

32. Anon, *Zim tries power from pig manure*, in *News24 (SA)*. 29 August 2005.
33. Anon, *Zim to grow 'oil trees'*, in *News24 (SA)*. 5 October 2005.
34. Anon, *Zimbabwe: Harare's Water Supply Threatened*, in *UN Integrated Regional Information Networks*. 28 March 2005.
35. Anon, *RUWA Board in Dilemma*, in *The Herald (Harare)*. December 10 2004.
36. Chimhete, C., *Outcry Over Growing Urban Pollution*, in *Zimbabwe Standard (Harare)*. 4 July 2004.
37. Anon, *Councils Pollute Manyame River*, in *The Herald (Harare)*. 4 August 2005.
38. Anon, *Mutare Council in Court Over River Pollution*, in *Zimbabwe Standard (Harare)*. September 26 2004.
39. Anon, *Mining decline hits workers hard*, in *IRIN (UN)*. 29 April 2005.
40. Ndlovu, N., *Minister takes up gold panning*, in *The Zimbabwe Standard*. 9 October 2005.
41. Anon, *Masvingo Plagued By Rampant Gold Panning*, in *The Herald (Harare)*. 7 January 2005.
42. Anon, *Parks Authority Forms Taskforce to Reclaim Gullies in Safari Area*, in *The Herald (Harare)*. 18 March 2005.
43. Keche, K., *Kadoma Gold Millers Risk Mercury Poisoning: Study*, in *The Herald (Harare)*. 20 September 2005.
44. Masood, E., *Panners Spill Cyanide, Mercury Into Dam*, in *The Herald (Harare)*. 17 May 2005.
45. Anon, *Panners to Receive \$2bn to Formalise Operations*, in *The Herald (Harare)*. 9 March 2005.
46. Anon, *Zimbabwe's Victoria Falls rainforest is slowly dying*, in *Environment Africa*. September 2003.
47. Chenga, N., *Support reforestation initiatives*, in *The Herald (Harare)*. 26 July 2005.
48. Anon, *Tobacco Farmers Urged to Establish Energy Woodlots*, in *The Herald (Harare)*. 9 February 2005.
49. Matope, T., *Moringa Tree Production Gets \$60 Million Boost*, in *The Herald (Harare)*. 30 June 2005.
50. Gratwicke, B., B.E. Marshall, and T. Nhwatiwa, *The distribution and relative abundance of stream fishes in the upper Manyame River, Zimbabwe, in relation to land use, pollution and exotic predators*, in *African Journal of Aquatic Science* 2003. p. 25–34.
51. Gratwicke, B. and B.E. Marshall, *The relationship between the exotic predators *Micropterus salmoides* and *Serranochromis robustus* and native stream fishes in Zimbabwe*, in *Journal of Fish Biology*. January 2001. p. 68–75.
52. Bushdrunk, *Life in the Bush*, in *ZimConservation Forum*. 27 September 2004.
53. Anon, *Fire hits Zimbabwe game park*, in *BBC*. 30 August 2001.
54. Anon, *Uncontrolled Fires Destroy \$700bn Forests*, in *The Herald (Harare)*. 20 September 2005.
55. Anon, *Police, Zimbabwe Commercial Farmers' Union Team Up*, in *The Herald (Harare)*. 5 September 2005.
56. Child, G., *Elephant Culling in Zimbabwe*, in *ZimConservation Opinion* 2004. p. 1–6.
57. Matope, T., *People Illegally Settled On Conservancies Face Eviction*, in *The Herald (Harare)*. 7 June 2005.
58. Anon, *Wildlife on a roller-coaster*, in *ZimConservation Synthesis Report* 2004.
59. Child, G., *Wildlife and People: The Zimbabwean Success*, 1995, Wisdom Foundation: Harare. p. 257.
60. Mafunda, K., *Cheeky Chilli Chills Jumbos*, in *Zimbabwe Standard (Harare)*. 9 January 2005.

61. Anon, *Zimbabwe Elephant Conservation comes at High Cost*, in <http://www.wildlifetravel.net/>. 25 August 2002.
62. Bureau, B., et al., *Massive Dam Rehabilitation Programme On Cards*, in *The Herald (Harare)*. 30 June 2005.
63. Kombora, G. and A. Mukaro, *Chinese Given Kunzvi Dam Tender*, in *Zimbabwe Independent (Harare)*. 23 September 2005.
64. Chimowa, M. and C. Nugent, *A fisheries GIS for Zimbabwe: an initial analysis of the numbers, distribution and size of Zimbabwe's small dams.*, 2005, FAO/UNDP ZIM/88/021.
65. Thieme, M.L., et al., *Freshwater Ecoregions of Africal and Madagascar*, 2005, Island Press: Washington. p. 431.
66. Mutimba, G., *Floods Fear As Dam Wall Reveals Cracks*, in *Zimbabwe Standard (Harare)*. 8 May 2005.
67. Anon, *Four Elephant Calves, Buffaloes Die in Matetsi*, in *The Herald (Harare)*. 16 September 2005.
68. Clayton, J., *No food, no fuel - but a glut of elephants for sale at £1,000*, in *The Times (UK)*. 6 May 2005.
69. Wilson, M., *Horns of Dilemma*, in *BBC Documentary Film*. 4 April 2000.
70. Anon, *SADC Experts Pledge to Work Together in Managing Jumbos*, in *The Herald (Harare)*. 31 May 2005.
71. Editors, G., *Allan Thornton, environmental investigator, answers Grist's questions*, in *Grist*. 25 April 2005.
72. Anon, *Botswana to Switch On Electric Fence Before Poll*, in *The Daily News*. 8 March 2005.
73. Anon, *Anthrax strikes Zimbabwe wildlife*, in *Sunday Times (SA)*. 27 September 2004.
74. Maponga, G., *Anthrax Kills People in Masvingo*, in *The Herald (Harare)*. 18 November 2005.
75. Herbst, W., *Decimation of Zimbabwe's wildlife*, in *Kubatanet*. 13 June 2002.
76. Anon, *Paid Thugs Continue to Threaten Zimbabwean Farmworkers and Endanger Vital Breeding Herd and Wildlife Ahead of Deadline to Nationalise All Farming Land*, in *JAG Newsletter*. 5 June 2005.
77. Anon, *Zimbabwe: Zanu Elite, Anticipating Change, Takes Over Green Belt Farms*, in *SouthScan (London)*. 31 August 2005.
78. Thornycroft, P., *Top Zimbabwe Official Sues Colleague over Land Use*, in *Voice of America*. 05 September 2005.
79. Ncube, N., *Chefs in Fresh Land Grab Orgy in Mat North*, in *Financial Gazette (Harare)*. 25 August 2005.
80. Martin, J., *CENSURE: Concerted Effort for the National Survival and Utilisation of Resources and Environment ZIMBABWE*, in *The World Earth Summit, Johannesburg, South Africa, 2002*. 2002.
81. Fogg, C. and G. Conner, *Introduction of foot and mouth disease-infected buffalo into the Save Conservancy in Zimbabwe: Success or Failure*, in *Conservation and Development Interventions at the Wildlife/Livestock Interface: Implications for Wildlife, Livestock and Human Health*, S. Osofsky, Editor 2005, IUCN: Gland.
82. Anon, *Troops sent to protect wildlife*, in *Sunday Times (SA)*. 24 Sept 2000.
83. USAID, *Strengthened Natural Resources Management in CAMPFIRE Areas*, in *USAID Zimbabwe Mission website: Natural Resources Management* 2005.
84. Anon, *Hunting Proceeds Rake in \$12 Billion Per Month*, in *The Herald*. September 27 2005.
85. Anon, *Campfire Realises U.S.\$3m*, in *The Herald (Harare)*. 9 June 2005.

86. Macleod, F. and J. Sharman, *Political chaos takes its toll on Zim's wildlife*, in *Mail & Guardian (SA)*. 18 December 2001.
87. MacKinnon, J. and K. MacKinnon, *Review of the Protected Area System in the Afrotropical Realm*, 1986, IUCN: Gland. p. 295.
88. Mudekwe, J., *Gazetted Indigenous Forests in the context of the Land Reform Programme*, in *ZimConservation Opinion* 2005. p. 1-3.
89. Chigwerewe, S., *Sustainable Timber Harvest Vital*, in *The Herald (Harare)*. October 14 2004.
90. Anon, *Google Earth* www.earth.google.com, 2005.
91. Foundation, Z.C.a.D., *Zimbabwe : Transfrontier Park and World Heritage Site under threat*, in *Sokwanele Report*:. 1 August 2005.
92. Kadzere, M. and G. Sibanda, *Limpopo Accord Signed*, in *The Herald (Harare)*. 23 September 2005.
93. Anon, *Donors Spurn Zim Transfrontier Park*, in *Zimbabwe Independent (Harare)*. 4 February 2005.
94. Yeld, J., *Poaching 'hasn't affected peace park'*, in *Cape Argus*. 31 January 2003.
95. Anon, *Land invasions will not affect GLTP : minister*, in *SABC*. 18 July 2005.
96. Anon, *More Zimbabwe Ruins*, in *Sunday Times*. 17 July 2005.
97. Nkweta, Z., *Interview with Nhema*, in *Carte Blanche*. 4 August 2002.
98. Mbanga, W., *Land grab to go to arbitration*, in *The Zimbabwean (UK)*. 13 May 2005.
99. Watch, H.R., *"Clear the Filth" Mass Evictions and Demolitions in Zimbabwe*, in *A Human Rights Watch Briefing Paper*. September 11 2005.
100. Anon, *Rights under seige: Torture in police custody of opposition MP Job Sikhala*, in *Amnesty International*. 1 May 2003. p. AI Index: AFR 46/017/2003.
101. Watch, H.R., *Not Eligible: The Politicization of Food in Zimbabwe*, in *Human Rights Watch website* 2003.
102. Reuters, *Walking on empty - Zimbabwe fuel crisis: Opposition leader walks four miles to work, along with everyone else*, in *NBC*. September 16 2005.
103. Rodrigues, J., *Sinamatella runs out of water - Urgent appeal for help*, in *Zimbabwe Conservation Task Force*. 6 September 2005.
104. International, T., *Global Corruption Report 2005*, 2005, Transparency International.
105. Blair, D., *How girlfriend's father shot to success*, in *The Daily Telegraph (UK)*. 11 December 2004.
106. Anon, *Mugabe appoints police chief to oversee land redistribution*, in *Business Day (SA)*. 13 May 2005.
107. Anon, *Mugabe's loggers to ravage rainforest*, in *The Observer (UK)*. 26 August 2001.
108. Anon, *Zimbabwe's inflation hits record*, in *BBC*. 17 December 2003.
109. Anon, *Zimbabwe Central Bank Resists Full Dollarization*, in *Zim Observer*. 1 October 2005.
110. Anon, *Zimbabwe professionals exodus*, in *Angop*. 28 November 2004.
111. Anon, *Brain Drain Heads for Crisis: Study*, in *The Herald (Harare)*. 27 September 2005.
112. Anon, *Greener pastures create passport to corruption*, in *IRN*. 18 December 2004.
113. Anon, *A response to the article by BBC entitled, "POACHING THREATENS ZIMBABWE WILDLIFE"-BBC Thursday, October 02, 2003.*, in *ZANU PF homepage* 2003.
114. Anon, *Anti-Zim Crusade Goes Chemical*, in *The Herald (Harare)*. 28 June 2005.
115. Clemens, M. and T. Moss, *Costs and Causes of Zimbabwe's Crisis*, in *Center for Global Development*. July 2005.

116. Marawanyika, G., *Tourism Adds Only 2% to GDP*, in *Zimbabwe Independent (Harare)*. 20 August 2004.
117. Machipisa, L., *Sun sets on Zimbabwe tourism*, in *BBC*. 14 March 2001.
118. Office, F.C., *Travel Advisory for Zimbabwe*, in *Foreign & Commonwealth Office Website* <http://www.fco.gov.uk/>. 30 September 2005.
119. Wines, M., *The best of times and the worst, for two tourist towns*, in *New York Times*. 21 June 2004.
120. Anon, *Zim tourism police unit to protect foreign guests*, in *Star (SA)*. November 17 2003.
121. Shacida, S., *Zambia in the grip of a tourism boom*, in *AFP*. 14 February 2005.
122. Hanes, S., *Is it ethical to visit 'outpost of tyranny'?* in *The Christian Science Monitor*. 7 April 2005.
123. ZimConservation, *Online Poll - "Is it ethical to visit Zimbabwe - the outpost of tyranny?"* in www.zimconservation.com. 15 October 2005.
124. Mugari, S., *Exposé On Hotels a Mirage*, in *Zimbabwe Independent (Harare)*. 5 August 2005.
125. Authority, Z.T., *Tourism Statistics January-September Report*, in *Zimbabwe Tourism Authority website* <http://www.zimbabwetourism.co.zw/2004>.
126. Bhasera, A.C.a.S., *Pageant Set to Boost Zim's Image*, in *The Financial Gazette (Harare)*. 24 February 2005.
127. Anon, *Sources Say: Beware of charging elephants*, in *The Capital Online*. 10 June 2005.
128. Anon, *Is hunting in Zimbabwe ok with the political situation?*, in *African Hunter: Forum* 2005.
129. Guvamombe, I., *Safari Operators Probed*, in *The Herald (Harare)*. 16 August 2004.
130. Heath, D., *South Africans hunting Zim?*, in *African Hunter: Forum*. November 17 2003.
131. Maphosa, T., *UN Agency Reports Drop in Zimbabwe's HIV Infections*, in *Voice of America*. 11 October 2005.
132. WHO, *Zimbabwe*, in *World Health Organization website* <http://www.who.int>. 22 October 2005.

APPENDIX 1: ABOUT ZIMCONSERVATION

About us We are a non-partisan, non-profit, volunteer group of concerned scientists, conservationists and citizens set up in response to the continued deterioration of Zimbabwe's rich wildlife and environmental heritage.

Mission To establish a birds-eye view of the environmental changes in Zimbabwe since the year 2000, to investigate their causes and to lobby authorities and donors to take appropriate measures to curb further environmental degradation.

Establishment We have heard varied reports about what is happening on conservancies and in national parks in Zimbabwe. These reports give an idea of the nature of various problems facing the wildlife and environment at this time, but they do not analyse their scope or extent. Reports vary, depending on the time, place or the people involved. Restrictions on the press and lack of access to newly settled areas mean that most incidents go unreported, making it difficult for anyone to know exactly what is going on.

In order to have an informed debate, we need to establish some facts by collecting reports from a range of sources and slowly compiling them. In this way we might get a birds-eye view of the situation. We appreciate that it is impossible to remove oneself from the intense political feelings in the country right now, but in the interests of conserving our wildlife heritage for the future we need a heavy dose of reality and pragmatism in these discussions.

Our objectives will be achieved by:

- 1) Slowly compiling news stories, academic papers, reports and opinions from about what has been happening to Zimbabwean wildlife and habitats over the last 4 years. These will be made freely accessible on the Internet. The reports will be compiled by an editor and emailed to all interested parties on a monthly basis.
- 2) All incoming material will be synthesized in a one-page report to be released every two months.
- 3) Eminent conservationists and scientists will be invited to write periodic opinion pieces on any relevant topic that they choose in order to stimulate debate on the email list.
- 4) Hopefully, participation will increase to include people from many different sectors.
- 5) We appreciate that considering the scale of the human tragedy in Zimbabwe, these issues may seem insignificant, but hopefully this group will get people to start thinking about conservation again and this may lead to progress...whatever that might be.

APPENDIX 2: AN OVERVIEW OF THE DIFFERENT CONSERVATION AND ENVIRONMENTAL RESEARCH GROUPS ACTIVE IN ZIMBABWE

Organization	Web	Activities in Zimbabwe	Base
African Wildlife Foundation	http://www.awf.org	Community Conservation	Washington DC
Biodiversity Foundation for Africa	http://www.biodiversityfoundation.org	Consulting, Taxonomy, Research	Bulawayo
BirdLife Zimbabwe	http://birdlife.mweb.co.zw	Membership Based, Education, Research, Bird conservation, Natural History	Harare
Campfire Zimbabwe		Community Conservation	Harare
Centre for Applied Social Sciences	www.uz.ac.zw/units/cass	Social Science Research, Education, Training, Consulting, Tropical Resource Ecology	Harare
Chipangali	www.chipangali.com	Wildlife Orphanage, Education, Captive Animal Research	Bulawayo
Environment Africa	www.eafrica.utande.co.zw	Sustainable Development, Campaigning, Restoration, Community Conservation, Education, Membership Based	Harare
Flora Zambeziaca	http://www.rbgekew.org.uk/efloras/search.do	Plant Taxonomy	London
Hwange Lion Research	www.wildcru.org/links/hwangelions/hwange.htm	Lion Research	Oxford
Institute of Environmental Studies	www.ies.ac.zw	Education, Training, Research, Consulting	Harare
International Rhino Foundation	www.rhinos-irf.org	Rhinoceros Conservation, Wildlife Management	USA
IUCN	www.iucn.org	Sustainable Development, Policy, News	Switzerland
Lake Kariba Fisheries Research Institute		Fisheries Research, Fisheries Management	Kariba
Matobo Conservation Society		Conservation, Education, Human-Wildlife Conflict, Sustainable Development	Bulawayo
Painted Dog Conservation	www.painteddog.org	Painted Dog Research, Education, Community Conservation, Species Management	Dete
Peace Parks Foundation	www.peaceparks.org	Transboundary Land Management	South Africa
Save Foundation	http://www.savefoundation.org.au	Rhinoceros Conservation, Hyena Research	Australia
Spotted Hyena Research	www.geocities.com/hyaenaresearch	Hyena Research	Australia
Students for Environmental Action	http://uzweb.uz.ac.zw/sea	Environmental Youth Club	Harare
Tikki Hywood Trust	www.tikkihywoodtrust.com	Wildlife Orphanage, Captive Breeding	Harare
Tree Society of Zimbabwe		Membership based, Natural History, Research, Mapping	Harare
Tropical Resource Ecology		Education, Training, Research, Consulting	Harare
VLIR Aquatic Ecology	http://www.uz.ac.zw/projects/fisheries	Education, Training, Research, Consulting	Harare
Wildlife and Environment Zimbabwe	www.zimwild.co.zw	Membership Based, Education, Research, Species conservation, Natural History	Harare
Wildlife Conservation Society	www.wcs.org	Research, Human-Wildlife Conflict	New York
World Wildlife Fund	www.panda.org	POLICY WORK, Research, Education, SPECIES AND Landscape Conservation	Washington DC
Zambezi Society	www.zamsoc.org	Biodiversity Assessment, Watershed Management, Lobbying	Harare
Zimbabwe Conservation Task Force	www.zctf.mweb.co.zw	Environmental Investigation, Lobbying, Field Reports	Harare
ZimConservation	www.zimconservation.com	Environmental News Synthesis, Conservation Forum	Washington DC

APPENDIX 3: ZIMCONSERVATION TIMELINE

MUTAPA KINGDOM

- 1200** Establishment of Great Zimbabwe, a prosperous African Kingdom centered on cattle production, gold mining and trade.
- 1450** A combination of overgrazing and drought Zimbabwe Plateau surrounding Great Zimbabwe resulted in soil exhaustion, declining crop yields, and famine leading to it's eventual abandonment. Between 5000 and 30000 people lived in Great Zimbabwe at its peak.

EARLY COLONIAL SETTLEMENT AND WILDLIFE DECLINE

- 1896** Rinderpest, a contagious viral disease epidemic decimates wildlife in Rhodesia.
- 1899** Rhodesian Scientific Association (now Zimbabwe Scientific Association) formed to promote the advancement of science in Rhodesia. Their publications still provide an important local avenue for dissemination of research.
- 1900** Elephant population c.a. 4000, Human population c.a. 500 000.
- 1902** Cecil Rhodes dies, bequeathing estates at Matopos and Nyanga to the nation as National Parks.
- 1912** Extinction of white rhino in Rhodesia.
- 1919** Tsetse control programme launched. For the next 40 years the control programme involved exterminating over half a million large game animals in low-lying parts of the country supposedly to eliminate the fly's food source. Cattle grazing and early burning activities following the settlement of these dry, marginal areas lead to land degradation.
- 1927** The Wildlife Society of Rhodesia (now Wildlife and Environment Society of Zimbabwe) is established. Over the years they played a significant role in lobbying government on environmental issues, education, wildlife management and tourism. They now have many environmental centers and camps around the country, including the well-known Mukuvisi Woodlands in Harare. With membership at 2 500 (2002), it is the largest wildlife-oriented society in Zimbabwe.
- 1928** Hwange National Park, Rhodesia's largest park, established on marginal land prone to tsetse flies and drought.
- 1932** First largemouth bass introduced into the Matopos dam for angling, these predatory fish were subsequently translocated throughout the country by anglers and have lead to significant declines in native minnow populations in some areas.
- 1933** Rhodesia becomes party to the London Convention Relative to the Preservation of Fauna and Flora in their Natural State. While landholders under license could hunt on their own properties it became illegal to trade in their meat and skin. Some species were protected throughout their range, but this was impossible to enforce. Meanwhile, state veterinarians encouraged wildlife extermination to reduce cattle disease, and thousands of wild animals were being shot each year for Tsetse control.

- 1937** First record of water hyacinth, an invasive aquatic weed from South America.
- 1941** The Natural Resources Act—Rhodesia's principal environmental legislation passed in response to growing concern over soil erosion and deforestation. This led to the formation of the Natural Resources Board and the Intensive Conservation Area Committees comprised of private individuals and farmers who advised their peers on land husbandry issues.
- 1944** James Kapnek donated the founding grant for the University of Rhodesia, an institution that plays an important role in wildlife research and management.
- 1950** Crocodile populations at critically low levels as a result of over-hunting for their valuable skins.
Tree Society founded.
- 1951** Ornithological Association of Rhodesia (now Birdlife Zimbabwe) founded for the appreciation and conservation of birds and their habitats. Important contributions over the years have included the black eagle survey, important bird areas, the Zimbabwe crane working-group, and blue swallows and educational programs.
- 1956** Government offers bounty on painted hunting dogs as part of a predator-control programme that extended into National Parks, leading to the death of 2 700 animals.

CONSERVATION MOVEMENT GAINS MOMENTUM

- 1958** Reay Smithers, director of the National Museum invites 3 American Fullbright Scholars to Zimbabwe, Thane Riney, Ray Dasmann and Archie Mossman who begin work on the principles of wildlife management based on the principles of sustainable development.
- 1959** Kariba dam wall complete, soon to be the largest man-made lake in the world, and to have many significant environmental consequences including disruption of flood cycles on the middle Zambezi floodplain and the decline in rheophilic (current-loving fishes) and eels from much of their former range.

This beginning of Operation Noah, which involved the rescue of more than 6000 animals trapped on islands by the rising lake levels. This highly publicized operation drew much publicity and media attention, sparking the first widespread public interest in wildlife conservation.
- 1960** Wildlife Conservation Act revises legislation and philosophy governing Wildlife conservation; controlled hunting areas were established formalizing the game-hunting sector.

Flora Zambesiaca project begins with wide collaboration of many eminent botanists. This is an ongoing taxonomic project compiling taxonomic information on the 10 000 or so plants of the Zambezi basin.

Bulldozing of pans in Gonarezhou in the 1960's (exact dates unknown) in order to control Tsetse flies. These pans were important habitats for seasonal fishes including lungfish and *Nothobranchius furzeri*—an attractive, seasonal killifish that is now considered endangered largely due to this action.

The Nile crocodile becomes a protected species.

The mammals of Rhodesia, Zambia and Malawi by Reay Smithers is published.
- 1961** High court ruling ends state ownership of wild game on private land. Landowners no longer required hunting licenses on their own land. This led to the gradual increase in wildlife outside National Park estates as wildlife became viewed as an asset rather than competition and wildlife 'farming' was a realistic land use option.

Game ranching in Zimbabwe begins on Buffalo Range in the Lowveld

'*An illustrated guide to the freshwater fishes of the Zambezi River, Lake Kariba, Pungwe, Sabi, Lundi and Limpopo rivers*' by Rex and Hilda Jubb published.

- 1963** Formation of the department of National Parks and Wildlife Management through the amalgamation of the Southern Rhodesian Dept. of Wildlife Conservation and the Federal Department of National Parks.

Ray Dasmann publishes seminal work *African Game Ranching* advocating sustainable development practices.

- 1964** Bulawayo Natural History Museum opens to public.

UNILATERAL DECLARATION OF INDEPENDENCE FROM BRITAIN BY WHITE MINORITY GOVERNMENT

- 1965** First permits issued to capture baby crocodiles and eggs and raise them in captivity for commercial purposes, providing that 10% (and later 5%) of successfully reared animals are returned to the wild. This eventually grew into a successful industry and undercut poaching with hides from a legitimate source and replenished some wild crocodile populations.

- 1966** Kapenta were introduced on the Zambian side of Lake Kariba to occupy the newly created open-water habitat. Their population eventually grew to form the basis of Zimbabwe's largest commercial fishery.

- 1969** Aloe and succulent society of Rhodesia formed to advance the appreciation and conservation of ales, cacti, cycads, palms and succulents.

- 1971** Sengwa Wildlife Research Institute established for the long-term ecological research projects.

- 1973** Viv and Paddy Wilson create Chipangali Wildlife Orphanage in Zimbabwe, the concept was very appealing, their calendars and the publicity generated by the orphanage further raised the importance of wildlife in public consciousness.

- 1975** Parks and Wildlife Act subdivides the departments estates into 6 classes of protected area: There are currently 11 National Parks, 14 Botanical Reserves, 3 Botanical Gardens 5 Sanctuaries, 17 Safari Areas, and 12 Recreational Parks covering about 5 million hectares. The Act also established a board of independent experts to advise the minister. Landholders could now apprehend and sue illegal hunters for compensation of wildlife taken on their property; this encouraged protection of wildlife at the landholder level.

- 1976** *Southern African Epiphytic Orchids* by John Ball is published.

- 1978** DDT is used in Tsetse and later in Malaria-Control programs and as an agricultural insecticide. This pesticide bioaccumulates up food chains and causes significant damage to wildlife populations, especially predatory birds. It became widely used with application rates peaking in 1985 after which agricultural use was banned.

INDEPENDENCE AND BLACK MAJORITY RULE

- 1980** 43% land large scale, white-owned farms, 42% communal land inhabited by black Zimbabweans, 15% protected State Land.

Zimbabwe's Black Rhino population estimated at about 2000.

- 1981** Zimbabwe accedes to Convention on International Trade in Endangered Species of wild flora and fauna (CITES).

Birds of Zimbabwe by Michael Irwin first published.

- 1982** Drought devastates Zimbabwe; the air force assists with wildlife rescue operations, helping over 1000 head of game.

Department of National Parks and Wildlife Services begin controversial elephant culls to in response to overpopulation of elephants that were causing widespread habitat damage in some protected areas. Over the next 5 years, entire family groups were culled but some calves, especially females, were spared and used in reintroduction programs elsewhere.

RIFA Conservation Education Camp set up in the Mana Pools area by the Zimbabwe Hunters' Association in conjunction with the Department of National Parks and Wildlife Management, creating one of Zimbabwe's best environmental education facilities, catering for up to 1200 children per year.

Zambezi Society formed, a conservation and sustainable development advocacy group working in the Zambezi Valley.

- 1983** Through CITES Zimbabwe agrees to stop all international trade in rhino parts.

- 1984** Save Valley Conservancy is established by combining 24 adjacent farms and at 3 200km² it is one of the largest private game reserves in the world. Eventually, elephants, buffalo, giraffe, black rhino, white rhino, lion, eland, zebra and wildebeest are re-stocked into the area and a single perimeter fence is constructed to contain the animals.

- 1985** The Prime Minister, Robert Mugabe, authorizes shooting of poachers in self-defense, leading to an intensification of anti-poaching efforts in National Parks Areas.

Wildlife Producers Association formed to represent producers and develop markets for their game.

Use of DDT as a general agricultural pesticide is banned in response to human health concerns.

Ostrich farming begins in Zimbabwe, and by the late 1990's is a successful export-oriented industry with over 45 000 domestic birds, compared to a wild population of about 2000.

- 1986** The Rhino Girls Charlene Hewitt and Julie Edwards cycle 22 000km from Scandanavia, through Europe and Africa to Zimbabwe meeting famous personalities including Margaret Thatcher, Phil Collins and the Pope in order to raise awareness about Africa's endangered species. This remarkable feat raised the profile of the conservation movement in Zimbabwe significantly.

- 1988** *A Field Guide to Snakes and Other Reptiles of Southern Africa* by Bill Branch first published

Water Hyacinth is now a major pest on Harare's main water supply, Lake Chivero, and its proliferation is compounded by chronic eutrophication of the water supply and many resources are devoted to its control.

WIDESPREAD ACCEPTANCE OF THE SUSTAINABLE USE CONCEPTS AND LAUNCH OF CAMPFIRE

1989 CITES ban on international trade in elephant ivory.

CAMPFIRE (Communal Areas' Management Programme For Indigenous Resources) is finally launched after more than 10 years of negotiations and politicking. This revolutionary management scheme finally allowed communal farmers to financially benefit from the wildlife on their land (albeit with significant injections of US AID). This quickly became a widely used and adapted model for sustainable development in Zimbabwe and abroad. 90% of revenue generated is from the sale of game to foreign trophy hunters. It should be noted here that this model *compliments* the centrally administered National Parks system by encouraging the stewardship of wildlife populations *outside* formally protected areas where wildlife populations would normally be reduced as a result of human-wildlife conflict.

Elephant floppy trunk disease was first reported around Lake Kariba. Initial paralysis at the tip of the trunk gradually moved up and resulted in total paralysis. Scores of cases were reported in 2000 in South Africa and Zimbabwe.

Greg Rasmussen establishes Painted Hunting Dog research project raising considerable local and international awareness of the plight of these animals whose populations had been reduced to about 150 in the early 1980s.

Victoria Falls declared a UNESCO world heritage site.

Frogs of Zimbabwe by Angelo Lambiris published.

1990 Rhino Girls found Environment 2000 (now called Environment Africa, which has over 700 members and 30 staff (2003).

Southern African Ferns and Fern Allies by J.E. Burrows and *Grasses of Southern Africa* by E. Gibbs Russel published.

1991 Elephant census – population about 76 000 (about 10% of all the elephants in Africa), human population about 11 million.

Use of DDT in malaria control program is discontinued largely due to concern over contamination in tobacco exports.

A successful programme using weevils (*Neochetina eichhorniae*) to control invasive water hyacinth begins on Lake Chivero.

1992 Zimbabwe signs to the Convention on Biological Diversity in Rio, and later ratifies it; this important conference requires signatories to conserve biological diversity, promote its sustainable use and to share the benefits from its genetic resources.

Once again drought devastates Zimbabwe, this time the worst in living memory, Zimbabwe defense forces assist with wildlife rescue operations.

CAMPFIRE continues to be successful and now over 70 000 households are participating.

Britain stops funding land reform due to mismanagement and corruption.

1993 Extensive poaching of Black Rhinos over the years has reduced populations from 2000 at 1980 to 370. This led to intensification of anti-poaching activities and a de-horning programme, halting the decline.

1995 Nearly 30% of Zimbabwe's land now being used for wildlife conservation 14.8%, being State controlled Parks and Wildlife Estate and Forest Reserves.

Wildlife Producer's Association now has 680 members (about 15% of all commercial farmers).

1996 1st Pan African Symposium on the sustainable use of natural resources held in Harare.

The Mana Pools National Park in the Zambezi Valley was declared a UNESCO World Heritage Site.

1997 Anton Rupert launches Peace Parks Foundation creating the concept of joining wildlife parks in neighboring countries to form transfrontier wildlife reserves. They agree to focus on the Southern African region. It has seven honorary patrons, namely President Mogae (Botswana), His Majesty King Letsie III (Lesotho), President Muluzi (Malawi), President Chissano (Mozambique), President Nujoma (Namibia), His Majesty King Mswati III (Swaziland), and President Mugabe (Zimbabwe). Nelson Mandela (South Africa) is Patron Emeritus of the Foundation.

CITES delegates at the Harare meeting approved the applications by Zimbabwe, Namibia and Botswana to sell an annual quota of their collective 55 tons of ivory stockpile to Japan. None of the revenue generated was put back into direct elephant research or elephant conservation.

1999 The Pungwe pipeline inter-basin water transfer scheme is completed to supply the city of Mutare with water from a pristine national parks area. The necessity for this project was called into question in the light of recent completion of the (much closer) Osborne dam and it was mired in allegations of corruption, poor environmental impact studies and exorbitant costs (US\$ 60m).

LAND CONFISCATION AND POLITICAL UPHEAVAL

2000 Disgruntled peasant farmers invade white-owned commercial farms and privately owned game reserves, action that was tacitly sanctioned by the government. The new settlers disrupt farming activity and several white farmers and their workers are murdered.

Poachers and war veterans, taking advantage of the political impasse, heavily hit the Save Valley Conservancy and other conservancies. Francis Nhema, the minister of Environmental Affairs and Tourism criticized these actions, but little action was taken to restore order.

Illegal settlers invade an historically contested northern section of the Gonarezhou National Park.

After an excellent rainy season, Lake Kariba opens its floodgates for the first time in decades. However, this did not cause any significant rise in river levels downstream.

Under the Peace Parks initiative, Zimbabwe, Mozambique and South Africa sign treaties to establish the Great Limpopo Transfrontier Park, which at 35 000km² will be the world's largest wildlife conservancy.

2001 Zimbabwe Conservation Task Force established in response to environmental damage caused by land invasions and the break down of law and order, and poaching reports throughout former game ranches and conservancies continue.

In addition to snaring animals with wire made from boundary fences, the settlers on conservancies are reportedly burning grass, destroying wildlife grazing in order to make the animals easier to hunt and clearing trees for fields, and building materials.

2002 The Government passes restrictive media laws, condemned by the EU, the US and media rights organizations, criminalize the publication of inaccurate information and require journalists to register with a government body, and information flow from the most adversely affected areas of the country is severely reduced.

2003 Matobo Hills declared a UNESCO world heritage site.

Lion and Cheetah Park on the outskirts of Harare seized by a retired army colonel.

A special police unit is established to protect tourists in Victoria Falls and to help restore confidence in the battered tourism industry.

Illegal hunters from South Africa are reported to be taking advantage of the chaotic situation in Zimbabwe and hunting game, paying small trophy fees to the settlers.

2004 WWF and Save the Rhino Foundation report an upsurge in Rhino poaching over the last 3 years. They also note that the Dept of National Parks are losing up to 10 men per month at times, largely through mortality aggravated by HIV/AIDS and that posts are frozen and no new manpower has been recruited for three years while fuel and staple food shortages have greatly reduced the ability of the patrol teams to operate effectively.

Justice for Agriculture (JAG) reports that for the last two years many settlers and some unemployed farm workers have resorted to poaching and wholesale tree cutting to survive - or get rich. Wildlife/tourism direct losses run to over Z\$ 6.3 billion. It is believed that these figures are conservative and total losses could be much higher.

Peace Parks foundation announces plans to form the Limpopo/Shashe Transfrontier Park, which will join Mapungubwe (South Africa) with Tuli Safari area (Zimbabwe) and Tuli Block (Botswana).

It is estimated that just 500 white farmers remain on their land, down from 4000 in the year 2000.

Some Army officers and National Parks staff are accused of poaching game in the Kariba/Chirara game area.

Reports estimate that 40-80% of large game animals on former wildlife farms and conservancies have been poached. These figures undoubtedly vary from region to region but true estimates are difficult to ascertain because many former landowners have been evicted, or the estimates have not been done.

2005 Zimbabwe continues to slump economically resulting in almost complete dissolution of the formal economy, and wildlife continue to be decimated on formerly privately owned lands, but National Parks lands remain relatively intact.

30 black rhinos moved from Gourlays Farm in Matabeleland threatened by local snaring and horn poaching and moved to the Bubi Conservancy with Gonarezhou being the ultimate destination for some of them.

Operation Murambatsvina (or Drive Out Trash) begins using police, army and bulldozers to destroy the homes of 700,000 urban dwellers - widely seen as punishment to urban voters for their strong support of opposition parties.

Two Chinese nationals, believed to be part of an illegal ivory dealing syndicate involving former Bikita East Member of Parliament Walter Mutsauri, were granted a record \$250 million bail each.