



**An Open Letter to the Publics of Southern Africa and the World,
in response to John Varty's letter of 4th March 2019**

“ABOUT THE CULLING OF ELEPHANTS IN BOTSWANA”

I am amazed at how many elephant management experts there are in the Western World. Gauged by the number of letters of advice that land upon the desk of the Botswana President, Mr Mokgweetsi Masisi, there must be thousands. Now we have more advice from a well-known South African, John Varty, who has never conducted an elephant culling operation in his life - but who, none-the-less, has all the answers to Botswana's massively-excessive elephant population management problem.

Here is my tuppence worth of input to this debate:

Botswana currently suffers from a gross over-population of elephants that started some 60 years ago. No culling or any other kind of overt management has been practised on Botswana's elephants in all this time - thanks to the inadequacies of Mr Masisi's predecessors, - especially the most recent, Mr Ian Khama, who, when he was in office, listened to the advice of nobody but his animal rightists friends. And THEY all demanded that TOTAL PROTECTION MANAGEMENT be applied to Botswana's elephants... which is a recipe for disaster.

Mr Khama obtained most of his advice from a (strongly animal rightist) film-making cameraman called Derek Joubert, whose expertise is definitely NOT elephant management. Mr Joubert, however, like other animal-rights-orientated tourism operators in Botswana, in forging a friendship with Mr Khama, was looking after his own parochial interests – TOURISM. Mr Khama is himself a tourism-orientated businessman. And Mr Joubert persuaded Mr Khama into believing that, for tourism to prosper in Botswana, it was necessary to constantly bombard the country's tourists with massive wildlife spectacles - like huge herds of elephants - every hour of every day. He never once gave a thought to the utterly destroyed habitats in which these elephants lived, nor to the fact that maintaining elephants in these numbers was NOT ecologically sustainable.

Nobody seems to understand - or to care - that sustainable tourism can only be constructed on the establishment and maintenance of well-balanced ecosystems inside the national parks. If the ecosystems (comprising soils, plants and animals) are not stable and well-balanced, they

will eventually collapse; and when they collapse so will whatever eco-tourism structures that have been constructed upon them. So the first rule of thumb in the management of an African national park - in the interests of the park's wild animals and in the interests of eco-tourism - is to create and to maintain a well-balanced ecosystem. Mr Khama obviously did not know this. Neither do his animal rightist tourism-business associates - his erstwhile primary advisers.

But Mr Masisi DOES know this, and he is striving, against gigantic odds from an ignorant and misled First World public, to rectify that which his predecessors have ignored.

For many years elephant bulls were allowed to be hunted in Botswana – several hundred every year – and all this did was to (slightly) increase the preponderance of breeding females in the Botswana elephant population. Hence, during the 1990s already, Botswana's elephants were increasing at the rate of 8.3 percent per annum – which gives a population doubling time of about nine years. (An incremental rate of 7.2 percent per annum gives an exact population doubling time of 10 years.) There has never – in Botswana's history – been an elephant management strategy applied that has taken cognizance of elephant numbers, with relative regard to the elephant carrying capacity of the Botswana habitats.

As a consequence of all this past MIS-management, the elephants of Botswana have grown in number every year for the last 60 years. And during the height of every dry season - August/September/October/early-November - they have annually eaten out all edible grass and palatable woody plants within 25 kms of the dry season waterholes. And I mean they have eaten the edible vegetation FLAT - into extinction.

Huge numbers of large top-canopy trees have been wiped out (including whole groves of ancient baobab trees – some over 5000 years old); many favourite-food tree species have been eaten into extinction; and entire ecosystems (for example, riverine forests; and deciduous Acacia/Combretum woodlands) have completely disappeared – leaving behind exposed Kalahari sand-soil and little else. And, in the teak forests (which elephants don't fancy eating) they have demolished the understory plant communities in their entirety.

Under these conditions, as the dry season advances every year, the elephants find it harder and harder to find enough food to stay alive; and as each dry season month passes, they get thinner and thinner. Lactating mothers are the worst affected. And as their milk dries up so their baby calves (which are dependent on mother's milk for survival during their first three years of life) are abandoned. They are abandoned because, without their mother's milk, the babies do not have the energy to walk the (x2) 25 km journey, with their mothers - from the water, to the herd's food supply, and back to the water again - each day. These baby elephants die of starvation, of thirst and/or of heat fatigue; or in the absence of their mothers, they killed and eaten by lions and hyenas.

THIS is the reality of life - and death - for baby elephants in Botswana in this day and age. One benefit of this state of affairs - if you can call it a benefit - is that the multiple baby elephant deaths each year, slows down the otherwise very fast rate of natural elephant population expansion.

Another reality of this scenario is that every other species of herbivorous wild animal is plagued with the same problem - finding enough food to stay alive during the dry season (because the elephants have long ago eaten up all the edible plants). And (like the baby elephants) - because of inadequate nutrition - these other animals do not have the physical strength to make the 25 kms hike (each way) - between water and the location of the distant food supply. So,

these lesser animals have to 'somehow' find enough food in this plant-less desert to stay alive - or they die. And they do die!!! In 2013, the Botswana government admitted that all other game species that shared the demolished habitats with the elephants, were in free-fall decline by, on average, 60 percent. Some species were down in number that year, by 90 percent.

The reality is, therefore, that by hosting far too many elephants for far too long, Botswana's past political leadership sacrificed the country's biological diversity. Now we have Mokgweetsi Masisi in the saddle - a man of foresight and integrity, who wants to rectify all these wrongs - and all he is getting for his trouble is undeserved invective from people in the First World who do not understand that what Masisi is prescribing is EXACTLY what Botswana needs.

Wildlife management is the action that man takes to achieve man-desired objectives; and culling is the prescribed management practice for reducing an animal population, every year, by its annual increment - ONLY. Culling, therefore, serves the purpose of keeping the elephant population numbers stable.

This, however, is NOT what Botswana's elephants need at this time. Botswana's elephants now number between 10 and 20 times the sustainable carrying capacity of their habitats. They, therefore, need drastic "population reduction management" which has the objective of reducing the size of the elephant population very quickly. Population reduction management will reduce Botswana's elephants in numbers that are far above the annual population incremental rate. And they will need to be continually reduced in such very large numbers - for several years - until they reach a population number that the habitats can once again sustainably support. The botanical scientists will know when that number has been reached when they record that the habitats have started to recover.

Unless THIS be the management objective - and unless it is achieved - whoever is doing the management of Botswana's elephants, will be wasting his time. And pussy-footing around this emotionally-charged and delicate subject is also just a waste of time. The public needs to have the management needs of Botswana's elephants explained to them "cold-turkey".

Dealing with the byproducts of population reduction, however, is a secondary consideration. We must never lose sight of the fact that the purpose of the exercise is to *reduce the number of elephants*. Having said THAT, however, responsible and civilised people do not waste valuable natural resources.

Now we have another dubious expert pontificating about abattoirs, where they should be located and how they should be operated. I have carried out elephant population reduction exercises during my long career in African national parks - extensively - and I can tell you that you will have to reduce Botswana's elephants in very large numbers - for several years - to make any kind of impression on their numbers. Far more elephants will have to be 'taken-off' each day, therefore, than even a herd of abattoirs could ever handle.

What happens next (after an abattoir has been constructed) - as happened in Kruger National Park - is that the capacity of the abattoir to handle 'X' number of elephant carcasses per day, becomes the official factor that prescribes how many elephants you can "cull" (or kill) every day. And THAT is putting the cart well before the horse.

Nevertheless, it is possible to kill 50 elephants a day - have 15 carcasses processed by an abattoir each day - and have the remaining 35 carcasses processed 'in the field'. THAT would work! BUT it is NOT O.K. to kill just 15 elephants a day because THAT is all the abattoir can

handle. The essence of a population reduction exercise is to reduce the number of elephants. It is NOT to keep abattoirs operating at maximum efficiency. And the wildlife manager must NOT lose sight of that priority consideration.

You don't actually have to have an abattoir at all to effect elephant population reduction in Botswana. In Zimbabwe's Gonarezhou National Park – where I headed the management team that reduced that national park's elephant population from 5000 to 2500 in 1971/72:

- We killed, on average, 41.6 elephants a day, every day;
- We carried out all the biological work necessary on every carcass (and exactly the same data was recovered in the field in the Gonarezhou as was recovered by the South African scientists during the culling era (1967 to 1994) in the sophisticated Kruger National Park abattoir);
- Each animal was measured, sexed and fully biopsied;
- The hide was collected in panels, cleaned, salted and stacked;
- The meat was collected – cut into strips – salted and dried on chicken-wire racks in the sun (and thus turned into biltong that was deemed, by the veterinarians, to be suitable for human consumption);
- The ivory was collected, cleaned and indelibly punch-stamped; and
- The remnant bones and guts was all buried deep in the ground - EVERY DAY!
- NOTHING - except the intestines and the bones - was really 'wasted'.

NB: *Bulls - because they live in their own communities away from the cows - were shot, individually (or in small groups), with heavy calibre hunting rifles. We were conscious of the fact that. Ideally, we should kill one adult bull for every adult cow that we killed in the breeding herds. In practice, however, THAT didn't happen. However, Botswana's intention to resume elephant-bull hunting will 'roughly' take care of the number of bulls that **should** be removed from the population, too.*

The killing operation itself was carried out by three (hand-picked) highly expert game-ranger elephant-hunters, hunting in unison as a team and shooting at point blank range. We used British (=R1) military rifles - The NATO SLR (Self-Loading Rifle) (7.62 mm) - using ordinary pointed military bullets. And the three of us regularly 'put down' between 30 and 50 elephants inside the time span of just 60 seconds. One bullet - one brain-shot - one dead elephant. The biggest number we killed and successfully handled in one day was 57. So ALL this can be done - VERY HUMANELY; in the field; without an abattoir; and without helicopters.

NB: *Some sound and solid advice: Don't use helicopters. We used a Piper Super-Cub as our spotter aircraft instead - and it fitted the bill admirably. The elephants ignored the soft hum of this light aircraft's engine overhead.*

The very presence of a helicopter in the sky above a herd of elephants, scares the living daylights out of every individual - even those that have never seen a helicopter before. I had a helicopter at my disposal during the entire Gonarezhou exercise (both years) and when I realized just how badly they affect the elephant herds on the ground - scattering them and having every elephant running in panic for the hills - I stopped using it.

As far as the remaining elephants "losing trust" with man - after an elephant population reduction exercise was over - all I can tell you is my experience in this matter. We excluded all tourism activity during the killing exercise itself – but we allowed tourists back into the

Gonarezhou National Park after the operation - just a week after we had cleared the ground of all our equipment. And we encountered NO post-operation elephant aggression towards our visitors. This was, perhaps, because we killed every elephant in every breeding herd that we tackled; none escaped wounded; none escaped unwounded.

With regards to the observation that elephant-proof fences “cut off elephant migration routes”. That just doesn’t happen - simply because elephants do NOT “migrate” - not in the proper sense of that word. The core of an elephant’s home range is that part of its year-round habitat that it occupies during the very restrictive dry season period. This is the range that an elephant is forced to live in during the dry season because water is then the limiting and determining factor – with regards to just where an elephant can or cannot live at that time of the year. As soon as the rains arrive, and surface water becomes NON-LIMITING, the elephant herds disperse in all directions, over (in the case of Botswana) hundreds of kilometers – moving, during the rains, into Namibia, Angola, Zambia and Zimbabwe (Hwange National Park). Nevertheless, throughout the wet season elephants regularly visit the dry season part of their home range, too. This means that an elephant’s home-range ‘pulses’ with the seasons: being restricted during the dry season and very expansive during the summer rains – but no part of its overall annual home range is ever completely abandoned. Animals that truly migrate vacate their winter home range completely – and THAT does NOT happen with elephants. Elephants can be found wandering through their dry season home-range throughout the year.

And, with regard to elephants and fences, they very quickly learn how an elephant-proof game fence restricts their movements. Mr Varty’s observations about fences and other game animals, however, might well be valid - and Botswana has experience with this phenomenon. Some years ago, I am informed, tens of thousands of plains game animals died on the foot-and-mouth game fences that had been erected to safeguard Botswana’s beef-export industry with Europe.

Nevertheless, elephants can be beneficially restricted to their sanctuary reservations - without any adverse effects - by the use of elephant-proof game fencing. The only proviso to this observation is that they should ALWAYS be maintained in numbers that do not exceed the carrying capacities of their habitats. Whether or not other game animals - like zebra and wildebeest - can be correctly considered ‘migrants’, is not an issue that needs to be discussed in this dissertation – which is purely concerned with elephants and their management needs.

Game proof fences will also be a necessity if Botswana is to follow the South African game ranch model, too. So our judgments about the goodness or the badness of game fences should not be too magnanimous or too harsh. Fences have their uses in modern day wildlife management.

Mr Varty is correct in saying that Botswana is a beautiful country with an abundance of free-ranging wildlife; and, yes, it is probably true to say that it is the envy of every country in Africa. But the current wildlife management state of affairs in Botswana - where the habitats have been annually trashed for the last 60 years by too many elephants - also tells us that the present wild animal (especially elephant) populations are unsustainable. Under the current elephant population pressure, sooner or later, the wildlife ecosystems of Botswana will collapse - indeed, they are starting to collapse as I write these words - and, when that happens, everything else will crash, too. In this process, Botswana will lose:

- All its unique biological diversity;
- The fascinating physiognomic character of its game reserves; and

- Its tourism infrastructure will become an anachronism - because the massive wildlife spectacles (especially the never-ending displays of hundreds and thousands of elephants - that Botswana's tourist operators current rely upon to attract visitors) - will have disappeared.

Mr Masisi's plans, therefore....

- To reduce the grossly excessive elephant numbers to a level that will allow the already trashed and massively 'desertified' habitats to recover their former glory;
- From that basis to rebuild the strength and the vigour of the currently terribly degraded soils;
- To enable the full recovery of the heavily damaged plant communities (the habitats);
- To enable the currently dysfunctional ecosystems in the Botswana sanctuaries to recover; and
- To effect recovery of the FULL SPECTRUM of Botswana's wonderful wild animal species populations, and fascinating wild plants, in a state of balance with their ecosystems...

... is the right way to address this most important and vexing environmental problem.

I, therefore, agree with Mr Masisi's plans to introduce an elephant population reduction (culling) programme for Botswana. I agree that he should re-introduce elephant hunting as an additional population reduction measure; and I agree that the local rural people of Botswana should become part of a symbiotic partnership arrangement with government in the process of this entire exercise. Only when the rural people accrue significant survival benefits from 'their' elephants will they be incentivized enough to work WITH government to stop all illegal hunting activities - by anybody and everybody.

Further than that, I will not be so arrogant as to tell Mr Masisi HOW he should bring this massive programme into effect.

I make just two further suggestions: that Botswana should not restrict its elephant population reduction programme to the daily capacity of one (or more) abattoirs to handle "X" number of elephant carcasses. The population reduction exercise is too important a task, and too big a task, for anyone in the government of Botswana to lose sight of the purpose of the population reduction programme. And, in that regard, I recommend that the Botswana Government should agree to a primary population reduction target – and that they should stick to it; and that that primary objective should be to reduce the elephant numbers in Botswana – whatever they may be – to 50 percent of the current standing population number.

The final conclusion to this population reduction exercise - how many MORE elephants will need to be taken off - can and should be determined ONLY following the conclusion of this first step in the exercise.

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