

## **Feral horses and endangered spotted hyaenas in national parks in the southern Namib – how to resolve the conflict**

### **Setting the scene**

A small group of people with narrow vested interests in the horses on the plains around Garub near Aus, on the eastern edge of the southern Namib Desert, have been promoting the protection of these animals at the expense of the indigenous wildlife that the park was proclaimed to protect. This came to a head when spotted hyaenas started to prey on the horses. This interest group, through the use of social and other media, have stirred up emotions and the sentiments of well-meaning members of the public based on a misrepresentation of the significance of the horses to local and national tourism. They set up a false dichotomy – horses or hyaenas.

Through this process, they have placed increasing and undue pressure on the Ministry of Environment and Tourism to take premature and inappropriate actions to protect the horses. This first took the form of diversionary feeding of the spotted hyaenas in an attempt to distract them from preying on the weakened and geographically restricted horses (the horses are confined to one water point at Garub because of their maladaptation to the hyper-arid environment). When this proved unsuccessful, an attempt was made to capture and translocate the hyaenas, and finally to kill the hyaenas.

Scientists warned against all these actions. The feeding (and ironically, other horses were killed to feed the hyaenas in the hope that they would stop killing these feral horses!) resulted in more hyaenas being attracted to the area and increased hyaena breeding and recruitment. Because the feeding was done too close to the park border, it also resulted in hyaenas moving onto neighbouring farmland where they were killed. In addition, at least one farmer with a vested interest in the horses deliberately baited the hyaenas out of the park, presumably so that they could be killed on his farm. For 10 years prior to the feeding, this radio-collared group of hyaenas had not caused conflict on neighbouring farmland.

The capture and translocation of hyaenas is essentially a death sentence. Hyaenas need to operate within their clan system. Removing a few animals to a new area in which they are unfamiliar, and without their clan, and into a home range of an existing population of spotted hyaena, means that the probability of their surviving is remote.

And killing hyaenas in a national park – the very purpose of which is to protect indigenous biodiversity, and particularly endangered species which do not survive on farmland – goes against every conservation principle enshrined in our constitution, the mission and mandate of the MET and of good conservation practice.

In summary (Annex 1), the spotted hyaenas have suffered the following fate:

(a) Before the diversionary feeding began in 2017, no conflict related killings were reported. However, after the start of the diversionary feeding, 4 clan members were killed on adjoining farmland in October 2017. In June 2018 another 5 clan members were killed on a farm including one lactating female, whose cub most probably died then, too, as it was never recorded again. In July 2018, a dispersing male, collared by N'a/an ku sé was killed on an adjoining farm, as it was believed to belong to the Garub clan.

(b) In February 2019, 3 clan members were killed by MET including a collared female. The identities of the others have not been released. A review of camera trap data shows that one animal is missing, and that there are two individuals left, including a lactating female.

International exposure of the above actions would seriously tarnish Namibia's conservation reputation. Tourists would be deeply troubled to know that hyaenas were being killed so that they could see some in-bred feral horses kept under dubious welfare conditions, as they pass through Aus on their trip around Namibia.

It is clear that the feeding, capture and killing of hyaenas must stop immediately. Alternative arrangements must be made for the feral horses if their future is considered sufficiently important to local tourism.

### **Legitimacy in the Namib – an issue of animal welfare**

First, the term "wild horses" of the Namib is misleading and false. These are feral horses which were abandoned or had escaped around the time of the first world war. By definition, "wild animals" are able to survive and prosper in their natural habitat over the long term, by enduring variable climatic conditions (e.g. droughts) and predation pressures, without external human support. In the case of the feral horses, they need to be watered daily, fed for prolonged periods in times of drought (which are becoming more frequent) and protected from predators. In every sense, these are not wild animals. Without this support they would have died out a long time ago.



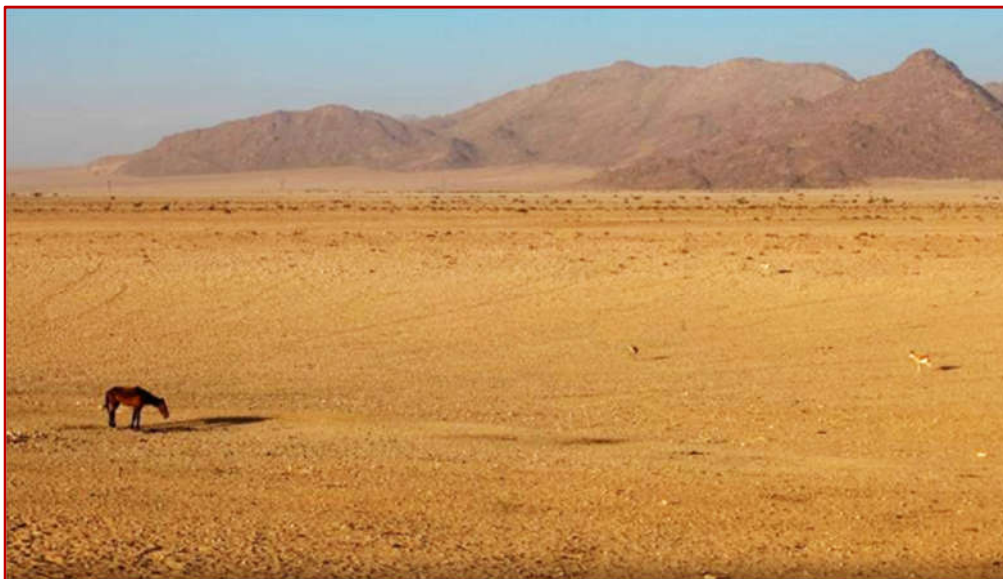
***These horses are not "wild" in any sense of the word***

The opening paragraph of the Namibia Wild (sic) Horses Foundation website states: *For centuries their origin was shrouded in mystery. Their habitat, the barren plains around Garub on the eastern fringe of the Namib Desert (part of the Namib-Naukluft Park), is no paradise. Nevertheless, they have managed to adapt to the harsh conditions and the arid land which fulfills (sic) all their needs.*

The feral horses have been in the Garub area in a feral state for about one century. Hypotheses of their origin have included German Schutztruppe horses, abandoned as the soldiers retreated; South African Union horses, dispersed when their encampment at Garub was bombed by a German

aircraft; and horses owned and abandoned by the Luderitz mayor-farmer Emil Kreplin on his farm Kubub south of Aus, when he was interned in South Africa. Based on pelage patterns, the last hypothesis seems most plausible, but also possibly some combination of the above.

Contrary to the Wild Horses Foundation statement, these feral horses have obviously not adapted to the harsh conditions, and the arid lands of the Namib do not fulfil all their basic ecological needs. As stated above, they have to be watered. The desert-adapted indigenous species of the Namib are not water dependent – they are therefore capable of moving throughout the Namib to find suitable patches of food. By contrast, the feral horses have to be fed during droughts, as they cannot leave the permanent water point at Garub in search of better grazing. This situation makes feral horses even more vulnerable to predators. In dry times they are left on their own as the wildlife moves away to areas of better grazing. This leaves the horses, now in poor condition, as a source of easy prey to predators. Descendants from domesticated horses which have been selected for their docility for thousands of years, feral horses have also lost their anti-predatory behaviours (e.g. stallions no longer protect their harem and foals from predators as do zebras), which makes them particularly easy prey for hyaenas. If indigenous wildlife in the Namib (or elsewhere) experience increased predation pressure, they move away. The feral horses cannot do this. They are certainly not adapted to the harsh arid conditions of the Namib in any meaningful way. Having to be watered, fed and protected from predation are three key characteristics that highlight the feral horses' total dependence on people.



***The Garub habitat is entirely unsuited to horses in the long-term – the rainfall here is currently eight times less than the lowest part of their ancestral wild range, and will get worst with further impacts of climate change***

The lack of adaptation among the feral horses is hardly surprising. They are living in an area that receives a long-term average rainfall of only 53 mm per year. The highest average monthly rainfall (in March) is less than 15 mm. The trend in long-term annual rainfall is clearly declining (Figure 1), and all climate predictions suggest that this trend will continue. Now compare this to where the original wild horses, from whence domestic horses were captured and bred, came from - the semi-arid steppes of Eurasia. The lowest rainfall in their historic range was in the order of 400 mm per year. And the area is served by perennial river systems. This is eight times more than the current average annual rainfall at Garub and rainfall predictions for 2040 (due to climate change) are even lower. In future, the feral horses of Namibia will be living in an area with only one-tenth of the

rainfall recorded in the driest part of their natal wild range. It is patently unreasonable to expect feral horses, from domestic ancestors, to adapt to, and survive in, climatic conditions that are so extreme compared to that of their wild ancestors. It is impossible for them to adapt and survive without continuous human intervention. Indeed, in our view, the feral horse problem is an animal welfare issue that requires urgent intervention. It is an imposed cruelty on these horses to leave them to try and survive at Garub under prevailing climatic conditions, which are set to worsen in future due to global climate change.

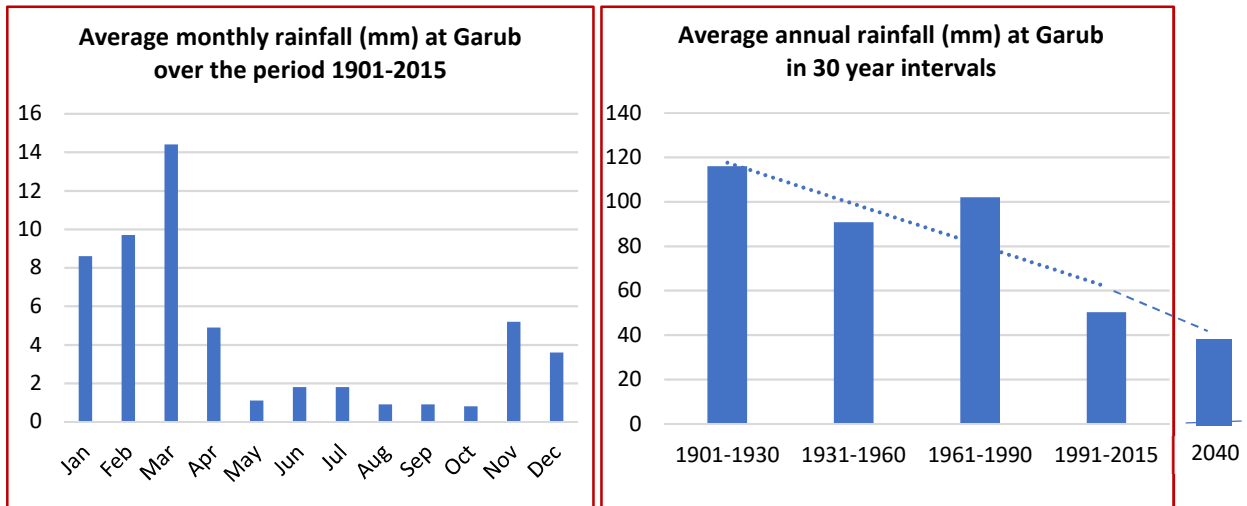


Figure 1: Average monthly rainfall and long-term annual average rainfall at Garub from 1901 to 2015 (World Bank Group Climate Change Knowledge Portal), and expected rainfall by 2040 based on climate change projections for Namibia.

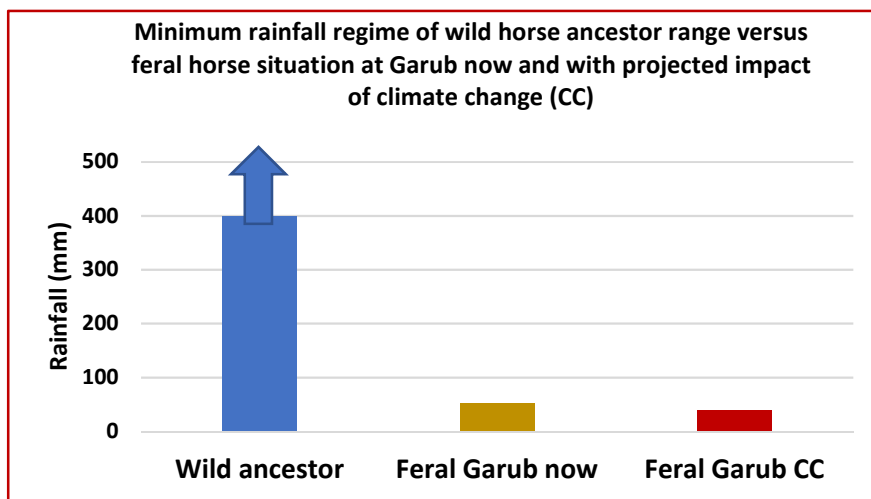


Figure 2: Minimum annual rainfall in range of ancestral wild horses, annual rainfall at Garub now, and predicted rainfall at Garub under increasing impact of climate change by 2040

### Importance of the feral horses to tourism

The impression has been created by people with a vested interest in the feral horses that they are an important tourism attraction in Namibia. For example, they state that *the wild (sic) horses of the Namib attract thousands of tourists each year*. They imply that the feral horses are one of the top 10 tourist attractions. These claims are clearly false. It is unlikely that any tourist leave his/her country specifically to see feral horses in Namibia. If the horses were to disappear tomorrow, it would have no discernable impact on Namibia's tourism.

Some people could certainly be persuaded to stop and look at something in the desert when there is very little else to see – after a long road journey of some 650 km from Windhoek to Aus, people would be interested in anything easily seen from the road. However, that is very different from a real attraction that would motivate them to visit a destination. You could put up a collection of life-sized puppets in the Namib (which has been done in a desert in the USA, together with a tearoom), and probably more people would stop to look at them – but they would certainly not plan a trip to Namibia to see the puppets. The same is probably true of the horses.

It is also easy to design a tourism questionnaire to get the results you are looking for. For example, if you lump attractions together you can eliminate the competition. You can ask visitors if they visit Namibia to see ‘the wildlife’ (all lumped together), ‘the national parks’ (all lumped together), ‘the cultures’ (all lumped together), etc, or the “wild horses of the Namib” (single item); make sure you include a few less attractive options to increase the number of ‘attractions’ available (gambling, hot springs, urban areas, etc). Then you can claim that the horses are in the top 10 attractions. However, any sensible person who has given this a moment’s thought will see the deception. Simply break down the wildlife into individual species and ask: “do you visit Namibia to see elephants or feral horses”, “rhinos or feral horses”, “lions or feral horses”, etc, then move to birds and reptiles, geology, landscapes and habitats, individual parks, cultures, and soon feral horses assume their rightful place in the list of attractions – insignificant.

This misleading information on the importance of the feral horses as a tourist attraction has been used to place undue pressure on the Ministry of Environment and Tourism and to elevate the importance of feral horses above that of (a) the integrity and stated purpose of the national parks in which the horses occur, and (b) the conservation of indigenous biodiversity, for which the parks were created and are managed. This obsession with feral horses, and the misuse of trusted social media sites, poses a risk of creating a very dangerous precedent that could compromise Namibia’s conservation reputation.

Another facet of the feral horse interest-group’s approach has been to play on the emotions of the uninformed public by misleading people with false imagery. For example, statements such as “we are fascinated because the wild (sic) horses have conquered an alien world” is simply untrue. The feral horses are held captive at a waterhole in a wholly unsuitable habitat, undergo considerable suffering and cannot move away because they are simply not adapted to this hyper-arid environment. We should pity these poor horses; not admire them. We need a better solution.

Similarly, statements about the horses *becoming a pure breed through decades of natural selection* is wholly misleading and pseudoscientific nonsense. During drought periods they have gone through a number of population “bottlenecks” when their numbers dropped to around 50 animals. They lost genetic diversity and, through genetic isolation, became increasingly in-bred. They now comprise a genetic subset of the original population. Rather than laud this situation, these inbred animals should be seen for what they are: a cruel convenience for a small vested interest group. And just for absolute clarification, the term “breed” enjoys no single, scientifically accepted definition because it is not an objective or biologically verifiable classification but rather a “term of art” (jargon) amongst breeders and fanciers.

## **Impact on indigenous wildlife**

*Decades of intensive research have resulted in a detailed understanding of the horses and their environment. The research conclusively substantiated that the horses are a **harmonious part** of the desert ecosystem and have found their home at Garub.* So states the website of the Namibia Wild



(sic) Horses Foundation. This was never true. There was always some competition with the indigenous ungulates such as oryx and springbok. But as these indigenous species are abundant in national parks and on farmlands in Namibia, this small area of competition was never considered a major concern. However, this statement of harmonious co-existence applies even less today than ever before. Spotted hyaenas are now preying on the horses. This puts those supporting the horses in clear conflict with hyaena and biodiversity conservation goals in protected areas.

The spotted hyaena is an endangered species in Namibia. It is considered “Vulnerable” nationally, as scientists estimate that only 600 individuals occur in the country. Before the killings, there were about 30 of them in south-western Namibia.



Spotted hyaenas are not compatible with farming. They are exterminated on both communal and freehold farms. Consequently, their only potentially safe place is in national parks – but as we have seen, even our national parks are no longer safe if a vested interest group raises enough social media attention. Protected areas are established specifically to protect indigenous biodiversity – all indigenous biodiversity; not just the pretty-looking animals – and particularly endangered species which cannot survive outside of such protected areas.

The clan of spotted hyaena that now live or used to live in the Garub area is certainly one of the most fascinating clans known to science. The collared female that was killed by MET had the largest home range of any spotted hyaena known to date – in the order of 500,000 ha. This huge range is necessary for survival in the hyper-arid Namib, as they must find prey that moves enormous distances in response to grazing and patchy rainfall.

To force government into management action, the feral horse group put out a simplistic, one-sided press release in the printed and social media asking the public to vote in favour of or against the horses. This caused a public outcry to save the horses. The sub-line in the press release strongly insinuated that the horses could only be saved if the hyaenas were removed. This established a classic false dichotomy – horses versus hyaenas, with little information shared with the public on the conservation importance of parks, predators in parks and this desert-adapted clan’s uniqueness. A classic case of manipulating public opinion to pressurise MET.

It is clear that the actions taken to date: diversionary feeding, capturing and killing hyaenas were all highly inappropriate. We have consequently reached a low point in conservation in Namibia. This is, however, not the end point. Dispersing hyaenas in the Southern Namib will be attracted into the hyaena vacuum created by removing the Garub clan, and by the availability of easy horse prey. A long-term horse-hyaena and human-wildlife conflict problem would thus be perpetuated. This sets a terrible precedent for dealing with other HWC situations where rural communities look to the government to remove predators that kill their domestic animals.

## **Possible solutions**

Before coming to solutions, it might be worth considering the ownership of the horses. They were originally domestic horses that were abandoned. For decades they lived in what was part of the Diamond Area. When parts of the diamond mining license were released by CDM (de Beers) and included into the Namib-Naukluft Park, Garub fell within land administered by the state (now by MET) for conservation purposes. The MET's mandate is to protect and manage indigenous biodiversity in protected areas. These feral horses were not technically "owned" by MET, unlike the domestic horses used by field staff in Etosha and Waterberg, which were listed on the acquisition registers of the respective parks. I doubt that the Garub horses are on any register. It could thus be argued that they are not technically a state asset and would therefore not have to be alienated from the state through a complex process. It follows that they are actually not covered by Ordinance 4 of 1975 and thus not a state asset. This understanding of ownership (or lack thereof) may facilitate far faster and easier implementation of the solutions listed below.

## Principles

There are a number of principles that should guide our decisions regarding the way forward:

- a. Killing, capturing and feeding hyaenas to stop them killing horses is not a viable solution. It does not produce the desired outcome for the horses long-term and more important, it contravenes the basic principles of protected areas. It further creates an ongoing human-wildlife conflict situation. It will tarnish Namibia's conservation image internationally and, ultimately, may lead to a tourism back-lash against the horses.
- b. The feral horses may have a small role to play in tourism in the southern Namib, although there are no data to support this. Aus is a natural stopping point on the way to Luderitz and the horses are probably far less significant to tourism than is projected by the vested interest group. Nonetheless, a viable solution for the horses must be found.
- c. The present locality of the feral horses at Garub is far too arid for their own welfare. It would be preferable for them to be located further east – in a higher rainfall area with more secure grazing and a number of alternative water points, and away from predators associated with national parks.
- d. The horses should be near a national road where they can be easily viewed by interested tourists. Affordable and ready access to tourists must be ensured.
- e. A benefit-sharing plan must be developed for local communities to benefit from the presence of the horses, both directly and through job creation.
- f. Currently, there is no specific income generated from the horses. Indirect income is generated by tourists staying at accommodation facilities in and near Aus. There are no data to indicate whether fewer people would stay there if there were no horses.

## Option 1: Moving the horses

- Taking into account the above guiding principles, it is clear that the future of the horses (from both predation and rainfall / grazing considerations of their welfare) would be best served by removing them from Garub and finding an alternative location.
- The future of the southern parks and their biodiversity would also be better served by removing the horses from Garub to somewhere outside the park. Valuable MET staff time and resources are being used on this issue, which is not part of their conservation mandate at best, and actively destroys their conservation reputation at worst.
- There are two potential options for alternative locations:
  - The “Namib Wild Horse Foundation” or another organisation (or a joint venture arrangement) could be given an opportunity to find an alternative site that meets the above principles and conditions; or
  - The !Han /Awab communal conservancy could be approached to provide land for the horses. This conservancy is on the main road between Keetmanshoop and Aus, and the horses would provide an economic opportunity for the conservancy. The “Namib Wild Horse Foundation” could provide support to the conservancy by raising funds or facilitating a joint venture partnership to establish a small lodge that would employ local guides. This business development would provide tangible community benefits. Some of the benefits could also be shared with the Aus Community Trust.
- The feral horses would remain the “property” of MET under a custodianship agreement, so that MET can ensure that the above guiding principles and requirements are met and implemented.

#### Option 2: Managing the horses at Garub

- If moving the horses is not a politically acceptable solution, then the area of the park(s) in the immediate vicinity of the Garub waterpoint should be (a) zoned as a multiple-use area, and (b) fenced with a hyaena-proof fence.
- The size of this fenced area should be large enough to allow an agreed population of horses (max 150 animals?) to disperse and forage, but no larger than absolutely necessary.
- The zoned area should be made available to the Aus community under a concession arrangement, in a joint-venture partnership with appropriate organisations who could help ensure (i) appropriate long-term management of the horses, and (ii) the preparation and implementation of a business plan to generate income and benefits.
- The JV partnership would then take on all management responsibilities for the horses, with MET providing monitoring oversight.

#### Further recommendations

- The feeding, capture and killing of hyaenas must be stopped immediately. As an interim measure, guards could be placed at Garub to chase away the hyaenas, or the horses could be captured and held somewhere safe until appropriate arrangements have been made for their custodianship.



- Baiting hyaenas to attract them from the national parks onto farmland must stop immediately. Any farmers found doing this should be charged and prosecuted.

Hopefully, the right actions will now be taken to address the unhappy conflict that arose when the spotted hyaenas started preying on feral horses in the southern Namib national parks. Mistakes were made because the proponents of the feral horses disregarded professional advice provided by conservation scientists. They used misleading information, created a false dichotomy of conflict (horses or hyaenas), and aroused public sentiment by inappropriate use of the printed and social media, thereby placing undue pressure on MET to act. With a more balanced perspective, I believe that the way forward should now be more clear.

Chris Brown

March 2019

Annex 1: What has happened to date ...

Actions	Intended consequences	Actual consequences
Before interventions	“... research conclusively substantiated that the horses are a harmonious part of the desert ecosystem ..” (Wild (sic) Horse Foundation website)	<ul style="list-style-type: none"> <li>• There was no conflict-related killings of hyaenas on adjacent farmland recorded for the satellite-collared hyaenas prior to diversionary feeding started in 2017</li> </ul>
Diversionary feeding	Stop hyaenas killing horses  (horses were killed to feed to hyaenas to divert them from killing “these” horses)	<ul style="list-style-type: none"> <li>• Attracted more hyaenas</li> <li>• Hyaenas bred well</li> <li>• Killing of feral horses continued</li> <li>• Feeding done near farms – hyaenas killed on farms</li> <li>• Emboldened farmers to bait on farm and kill hyaenas there</li> </ul>
Capture and move hyaenas	Remove hyaenas from area	<ul style="list-style-type: none"> <li>• Failed – could not catch them</li> <li>• Relocated hyaena(s) would probably have died</li> <li>• Not a long-term solution – other hyaenas would move in resulting in ongoing long-term conflict</li> </ul>
Kill hyaenas	Reduce or destroy hyaena population in area	<ul style="list-style-type: none"> <li>• 4 hyaenas killing on adjacent farms in October 2017</li> <li>• 5 hyaenas killed on adjacent farm in June 2018, including 1 lactating female, thus cub probably died</li> <li>• 1 collared dispersing male killed on adjacent farm, July 2018</li> <li>• 3 hyaenas killed by MET in February 2019</li> <li>• Not a lasting solution – entrenching HWC (&amp; between people)</li> </ul>