

Background information and species management guidelines



Puku

MANAGEMENT

Under Namibia's evolving wildlife legislation, management plans are required for species which are rare or valuable. Reedbuck, waterbuck, lechwe and puku are rare, valuable and in Namibia are found mainly in the floodplains and riparian belts of river systems along international borders. The management guidelines address three objectives: Social, Ecological and Economic.

Social Objective

The social objective is to develop a co-management institution in the Caprivi for the conservation and management of wetland habitats. Typical measures under co-management might be zoning along rivers to preserve portions of the original floodplain, restricted areas for cattle grazing or seasonal use of grazing, fire management and control of illegal hunting.

Ecological Objective

The ecological objective of restoring and recovering wetland habitats will depend on the success of the social objective. Population sizes of all four species are ultimately determined by the rainfall regime. The best strategy for these species is to ensure that a viable nucleus survives dry conditions and is able to rebound when conditions improve.

Economic Objective

The economic objective is to realise the full potential of reedbuck, waterbuck, lechwe and puku as components of wildlife-based land use for the benefit of rural landholders and the State, according to the provisions for sustainable use in Namibia's Constitution. This objective should be progressively achieved as the ecological objective is met. As the numbers of these species in Caprivi and Kavango increase, so will the potential economic benefits from tourism and hunting.

REEDBUCK WATERBUCK LECHWE PUKU

	Reedbuck	Waterbuck	Lechwe	Puku
Seasonal breeding	All four species are able to breed throughout the year			
Breeding peaks	September-May	October & March	October-December	June-November
Gestation	220 days	280 days	225 days	240 days
Age at first conception	Some females conceive in their second year; all conceive in their third year			
Age at first parturition	In favourable years, about 50% of two-year-old females produce calves and all will produce calves in their third year of life			
Fecundity (adults)	Offspring may be produced at a rate slightly higher than one per year in favourable conditions			
Longevity	Uncertain: it has been assumed that few animals survive beyond 10 years of age in the wild. Waterbuck, being larger, may have a slightly longer lifespan			
Breeding longevity	Females are probably capable of breeding throughout their adult life although fecundity may be reduced in last few years			
Mortality (juveniles)	May be as high as 50% in poor years. 33% has been used as typical			
Mortality (adult males)	Around 10%, increasing in the last few years of life			
Mortality (adult females)	Less than 5% except in last few years of life			
Adult sex ratio	About 2 males:1 female depending on hunting regimes and predation			

CONSERVATION SIGNIFICANCE

The IUCN Red Data book classifies all four species as at 'Lower Risk (Conservation Dependent)'; indicating that they are not threatened at the global, continental or regional levels. All four species are of conservation concern at the national level in Namibia because their natural range is limited to Caprivi and Kavango, their numbers are low and appear to be declining, and some of the subpopulations are isolated from one another. However, since reedbuck, waterbuck, lechwe and puku in the Caprivi are spatially linked to larger populations in Botswana, with careful management their populations should slowly recover. This recovery would be significantly enhanced by reintroducing animals. These species are specifically adapted to floodplain habitats and when present in substantial numbers they establish the unique character of the area. Their disappearance from Namibia's wetland habitats would be a significant cultural, ecological and economic loss. Their persistence in healthy numbers is a key indicator of ecosystem health and good local management.



Lechwe



Reedbuck

ECONOMIC SIGNIFICANCE

Once populations of these species have recovered, substantial economic benefits could be derived through tourism, live capture and sale, and trophy hunting. Safari hunting is capable of producing competitive returns from land with little adverse ecological impact, low capital investment and rapid returns to land custodians. The benefits of achieving the highest valued land use through hunting and tourism would be considerable - providing income to increase the standard of living of landholders and creating incentives for more land to be put under wildlife management.



NUMBERS AND DISTRIBUTION

	Reedbuck	Waterbuck	Lechwe	Puku
Caprivi * Present populations	100	25	200	Not recorded
Caprivi * Highest estimate	250 (1980)	150 (1994)	13,000 (1980)	Uncertain
Freehold farms	Uncertain	3,500	200	None
2004 TOTAL	200?	3,750	400	Uncertain
Potential population in Parks †	1,000	1,000	10,000	1,000

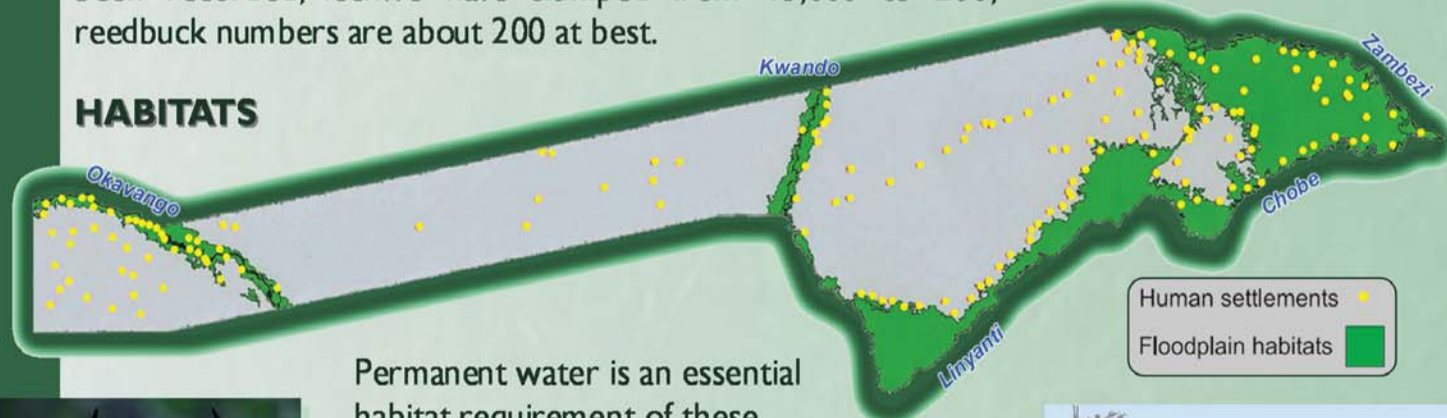
* likely to be underestimates, due to the difficulties of counting these species
† based on average densities of 2/km² (reedbuck, water and puku) and 20/km² (lechwe)



Lechwe

The species' natural range in Namibia is limited to Caprivi and Kavango, representing the fringe of larger populations in Botswana and Zambia. Within the Caprivi, they are restricted to the floodplains (4,500km²). Their populations in Namibia have fluctuated over the past century from being relatively abundant to being near extinction. The fluctuations appear to be linked to long term rainfall cycles and river flows. Today the population levels of all four species are a matter of concern: puku are almost extinct; in the last decade only about 20 waterbuck have been recorded; lechwe have slumped from 13,000 to 200; reedbuck numbers are about 200 at best.

HABITATS



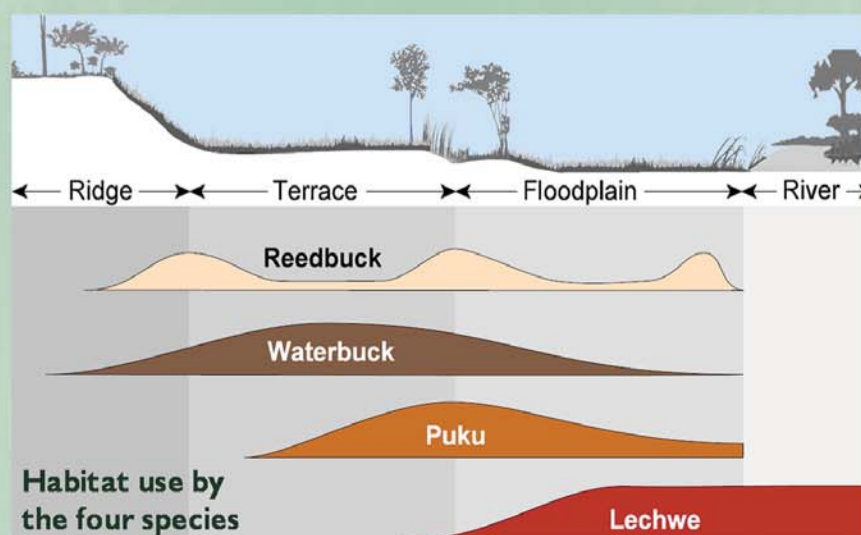
Permanent water is an essential habitat requirement of these species; they are rarely more than 2 km from water. They also have very specific vegetation requirements.



Waterbuck



Reedbuck



Habitat use by the four species

TRANS-BOUNDARY CO-OPERATION

Transboundary cooperation, particularly between Namibia and Botswana, could make a substantial difference to the conservation of these species. Namibia's primary conservation objective is to increase their numbers and avoid fragmentation of the populations. Maintaining spatial linkages with Botswana will be vital.

Other possible areas of co-operation are:

- 1) Ensuring compatible forms of land use on both sides of the international boundary;
- 2) Expanding the available range for reedbuck, waterbuck, lechwe and puku;
- 3) Co-operating on law enforcement directed at illegal hunting;
- 4) Managing the interaction between these four species and others, particularly elephants;
- 5) Controlling fire;
- 6) Collaborating on air surveys to improve population estimates;
- 7) Collaborating in setting hunting quotas and monitoring sustainability of hunting; and
- 8) Maintaining liaison between wildlife departments and communities managing wildlife on both sides of the international border.



Lechwe



Puku