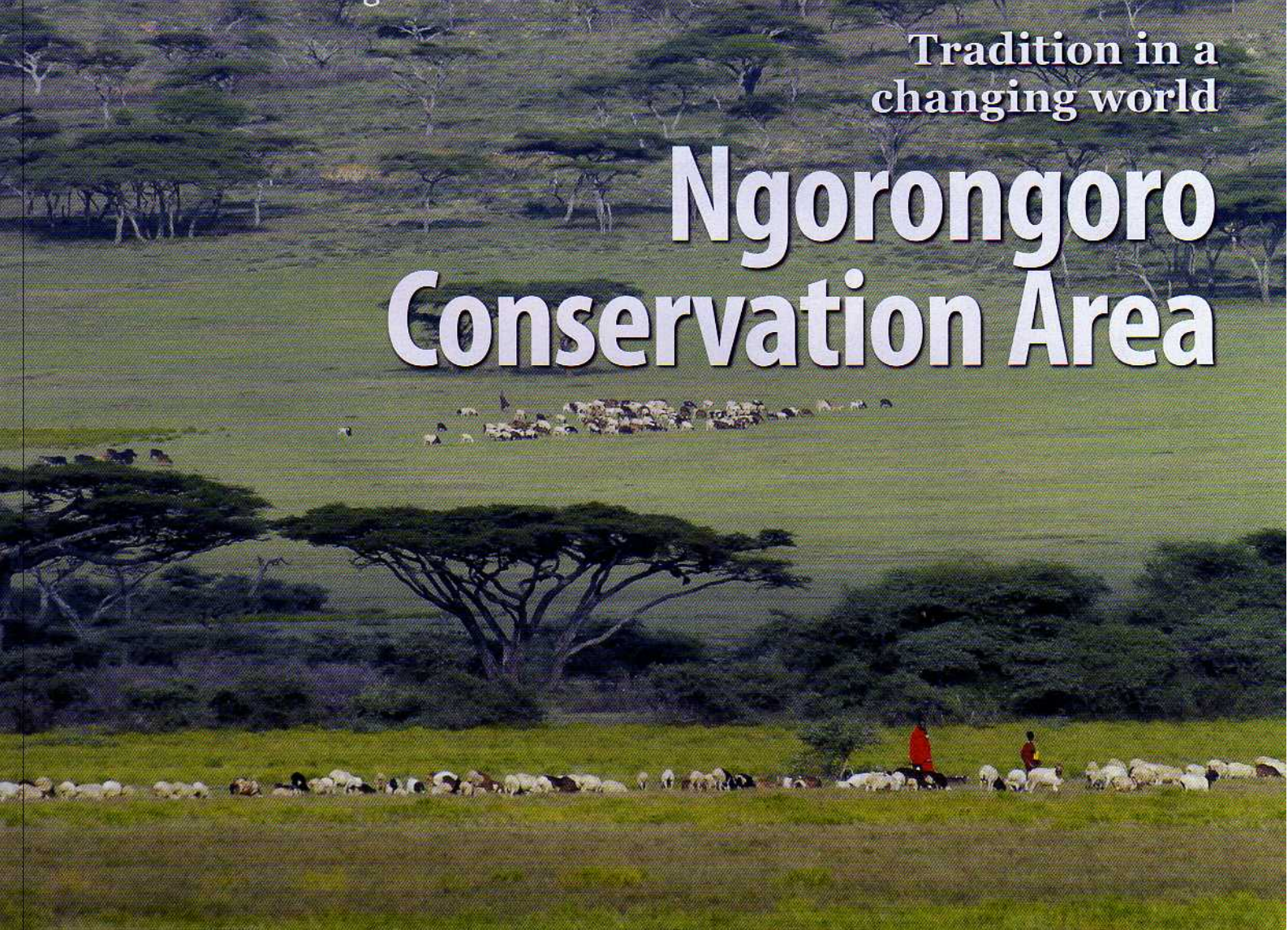


Tradition in a
changing world

Ngorongoro Conservation Area



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The United Republic of Tanzania's Ngorongoro Conservation Area (NCA) is one of Africa's most important wildlife areas and a bold experiment in multiple land use. At its core is the world famous Ngorongoro Crater – a giant caldera in which the dramas of life on the African plains are played out each day by a diverse assemblage of large mammals – wildebeest, zebra, lion and rhino – in a primeval 'Garden of Eden'. Beyond the crater rim, Maasai pastoralists in bright red shukas proudly herd

their cattle across the plains, seemingly oblivious to the herds of wild animals sharing this vast landscape, the 'endless plains' of Serengeti.

Ngorongoro was one of the first natural sites to be accorded World Heritage status in Africa, back in 1979. It was an obvious candidate to join the list of Earth's most precious places: not only does it encompass the extraordinary crater with its resident populations of wildlife, but also provides critical wet season grazing for the great herds of wildebeest, zebra and gazelle –

nearly 2 million animals – which make their annual traverse of Serengeti in the world's most spectacular wildlife migration, following the rains in a perpetual quest for fresh nutritious grazing. And, hidden below the surface, are clues to human origins and the species our ancestors encountered as they strode across this landscape for nearly 4 million years at places such as Laetolil and Olduvai Gorge – now world-renowned palaeontological sites.

The NCA covers some 8,300 km², but its attributes and ecological integrity are inti-

mately linked with those of adjacent protected areas in northern Tanzania and southern Kenya, including Serengeti National Park; the Maswa, Grumeti and Ikorongo Game Reserves; and Kenya's Maasai Mara national reserve. Together these protected areas cover an area of almost 30,000 km², encompassing most of the great migration route.

The NCA is the southernmost portion of this protected area complex, and includes a portion of the low-lying Serengeti plains, and a highland area of volcanic origin which includes Ngorongoro Crater as well as eight other extinct volcanic craters and calderas. It is a dramatic landscape, ranging in altitude from 3,700 m at the top of Lolmalasin to below 1,100 m at the base of the rift valley at Lake Eyasi. There are highland forests draped in lichens and mosses; swamps, rivers and cascading waterfalls; granite *kopjes* (steep-sided hills) punctuating the endless short-grass plains; shifting sand dunes; eroded gulleys exposing ancient secrets, layered with tales of changing climates over the millennia; flat-topped Acacias and giant succulent Euphorbias.

The pastoral life

According to most reports, the Maasai moved into this area about 150 years ago, herding their cattle to areas of fresh pasture as the seasons and environmental conditions dictated. Their traditional way of life revolves around cattle, a nomadic existence with the majority of the people's nutritional requirements provided by cow's milk and blood. Traditionally, the Maasai never stay in an area long enough to grow crops. They do not hunt wild animals for meat except under exceptional circumstances. Co-existence with wildlife is deeply rooted in Maasai culture and the wildlife of Ngorongoro – and broad swathes of land straddling the rift valley in Tanzania and Kenya – owes its continued existence to the protection of the Maasai over past centuries.

New demands on resources

The NCA came into existence in 1959 under an agreement between the Maasai elders and the Tanzanian Government 'to conserve and develop the natural resources of the conservation area' and 'to safeguard and promote the interests of the Maasai citizens of the United Republic engaged in



Cattle herded into the crater for water and natural salt licks can create erosion problems on its steep rim.

cattle ranching and dairy industry within the conservation area'. The Maasai agreed to leave the adjacent Serengeti National Park and participate in a bold initiative to integrate conservation and human development within the NCA. The Ngorongoro Conservation Area Authority (NCAA) was established as a semi-autonomous body to implement this conservation and development mandate.

As the Maasai have demonstrated for hundreds of years, man and wildlife can

co-exist in harmony – at least within a self-regulating system where neither man nor wildlife exerts excessive demands on the productive capacity of the natural environment. But as demand on the natural environment increases, so does the potential for conflict between development and conservation needs. Inevitably, the NCAA faces many challenges in its efforts to reconcile these needs. 'There were fewer than 8,000 Maasai living in the area when the NCA was created, but this had doubled by the time



New regulations are being introduced to restrict the number of vehicles entering the crater, but large cars inevitably create bottlenecks.



the area became a World Heritage site in 1979. Today there are an estimated 60,000 residents, together with about 300,000 cattle, sheep and goats', reports Bernard Murunya, chief executive of the NCAA. 'All these people have legitimate demands on the area's resources, and aspirations for a better life.'

The demands of tourists have risen even

more steeply – from an estimated 30,000 visitors in 1979 to 350,000 in 2006. Providing essential services for all these visitors – accommodation, roads, walking trails, guide services, etc. – is a major challenge, particularly as the main attraction – the Ngorongoro Crater itself – is only 300 km² in extent, or about 3.5 per cent of the conservation area.

Remarkably successful

'The NCAA has been remarkably successful,' David Sheppard, head of IUCN's Protected Areas Programme, told me on his return from a recent official mission to evaluate the site. 'Key to this success has been revenue retention, the ability of NCAA to return park entry fees and other revenues straight back into the conservation and



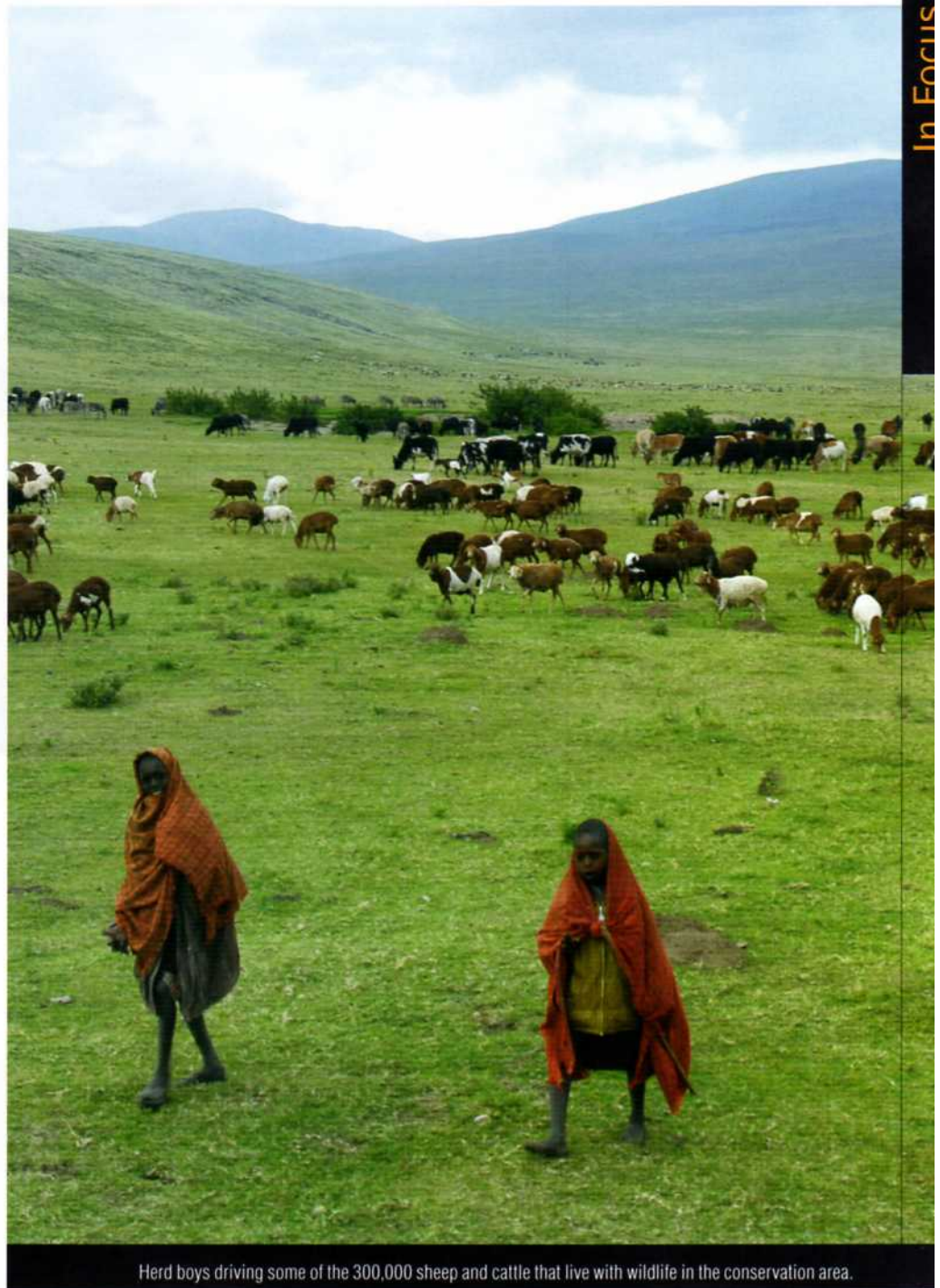
management of the area.' Fees and revenues have risen steeply in recent years, and visitors are willing to pay, especially if they know that their money is going directly into the conservation of this remarkable place.

'From a wildlife conservation standpoint NCA is in good shape, and has maintained the outstanding universal values for which it is recognized', says Amiyo Amiyo, conservation services manager with the NCAA. 'The migration is intact; wildlife populations are stable or increasing; and natural habitats are well protected. We have instituted a 24-hour surveillance operation for the highly endangered black rhino, with help from the Frankfurt Zoological Society, and this has enabled the population to increase from a low of eight to ten individuals ten years ago, to about twenty-two animals today'.

Avoiding marginalization

By contrast, the development aspirations of local people are not being adequately addressed, according to Simon Loishiye, project manager for the ERETO – Ngorongoro Pastoralist Project. 'Pastoralists are a marginalized group in Tanzanian society, with specific needs that demand support at national policy and local level. This support is rarely forthcoming, so pastoralists increasingly face a life of extreme poverty, food insecurity and destitution. The NCAA is trying to address the needs of the Maasai within the conservation area – by building schools, clinics and a local hospital; providing water; and upgrading local roads – but it is not nearly enough.'

And while the NCAA is providing for local development needs on the one hand, it is also restricting aspects of Maasai life within the conservation area. For example, the NCAA limits the areas where the Maasai are allowed to graze their cattle, and the building materials that can be used for construction of homes and *bomas* (cattle enclosures). Such restrictions were a constant source of conflict in the early days of the NCA, but the advent of a Maasai Pastoral Council in 1995 has provided an invaluable mechanism for consultation and decision-making over potentially contentious issues, and revolutionized the relationship between the Maasai and the NCAA. A portion of NCA revenues is now given directly to the Pastoral Council, which uses it in whatever way the Council decides

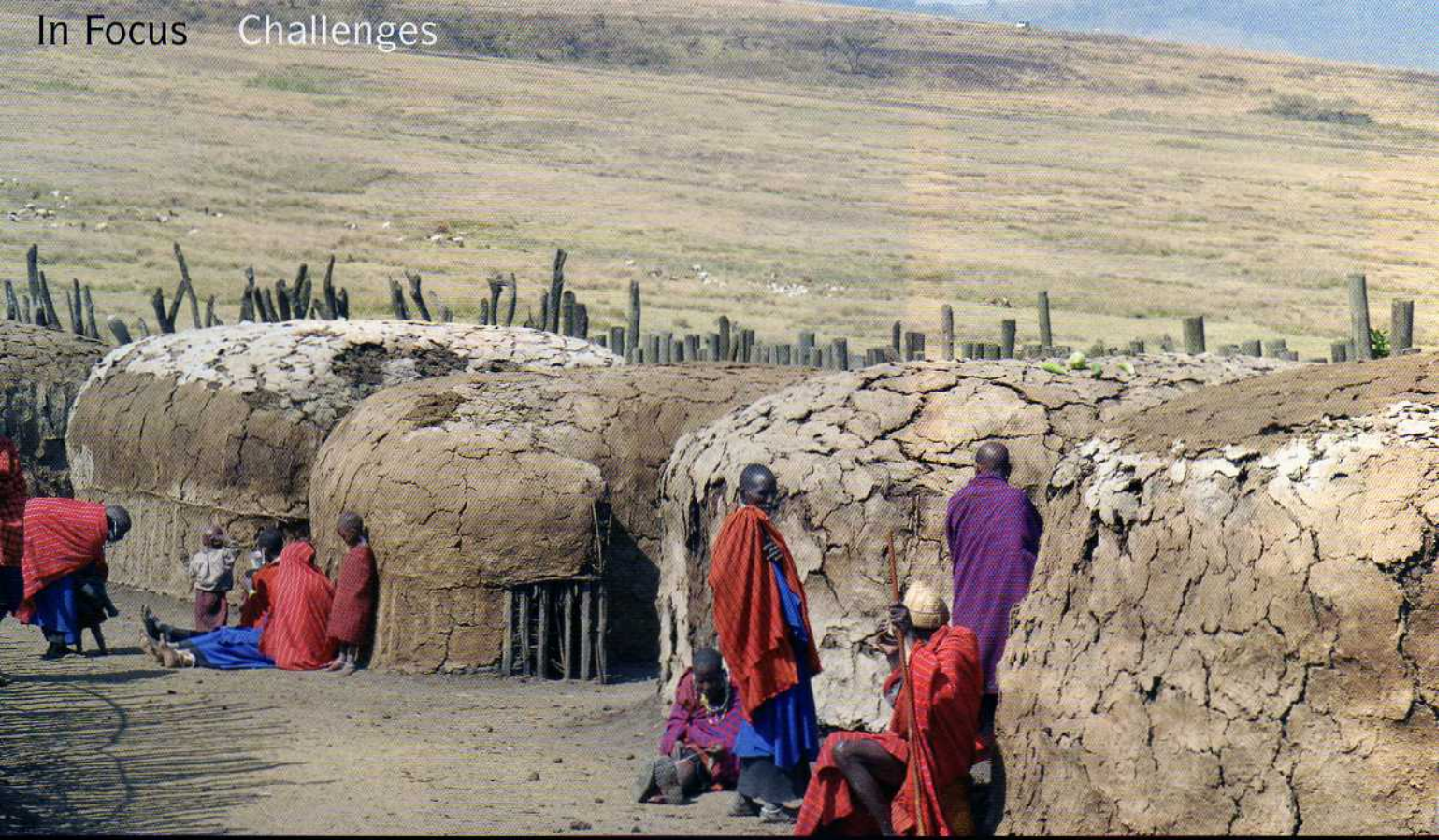


Herd boys driving some of the 300,000 sheep and cattle that live with wildlife in the conservation area.

– for example, to sponsor educational scholarships for local children to attend secondary and tertiary institutions outside the area (332 students were sponsored in 2006); to buy grain and other foodstuffs for distribution to poor families; and contribute in other ways to poverty reduction.

While the Maasai population has increased over the years, the number of their livestock has remained more or less constant, reflecting the carrying capacity

of the land within the conservation area. As a result, the number of livestock per person has fallen, and has now reached a level at which the Maasai can no longer depend on them as their sole livelihood. They are consequently turning to cultivation instead. Although it is strictly speaking illegal to cultivate within the conservation area, the NCAA has been forced to turn a blind eye to these violations, and has come to accept that each household requires an



A Maasai *manyatta*. Traditional Maasai culture and customs are undergoing rapid change.

acre (0.4 ha) under cultivation to provide an acceptable level of food security.

'The problem from a conservation point of view,' says Dr Victor Runyoro, chief ecologist with the NCAA, 'is that at present rates of increase there will be 125,000 people living in the conservation area by 2025, requiring 28,000 acres (12,000 ha) of land under cultivation. By then, the potential for conflict between local residents and the needs of wildlife will become intense.'

To begin addressing the problem, the NCAA has recently bought two pieces of land outside the conservation area, to allow for the voluntary relocation of some 1,725 non-Maasai immigrants, and provide accommodation and services for NCAA and tourist lodge staff outside the conservation area – but this is clearly a 'drop in the ocean' in terms of reducing the ever-increasing human pressures on natural resources.

Increasingly educated

Edward Ngobei, a local Maasai who works as a tourism officer for the NCAA, reckons that the potential for conflict between conservation and development needs is minimal. 'The Maasai are increasingly educated, and in future won't want to

live a traditional pastoralist life in the NCA, preferring to move out, find employment and a better life elsewhere,' he says. 'Others will get employment in tourism services locally, so won't be dependent on livestock or cultivation.'

Whether these changes can happen fast enough remains to be seen, but it is certainly

a trend that is already well under way.

Reconciling conservation and economic development is never easy, and the NCA is a unique experiment in achieving an appropriate balance. By many measures it has, so far, proved a success, but there are certainly many uncertainties and challenges on the road ahead. 🌱

