WHERE WATER SHAPES HE WILL

Kavango Zambezi's range is centred on the network of rivers that sustain life in the region. The role of water in these ecosystems is particularly evident in the vast Kafue National Park, says Dianne Tipping-Woods

loating in the balmy waters of a hot spring near McBrides' Camp, near where the Kafue River meets the Mushingashi River in northeastern Kafue National Park, my thoughts drifted to the hidden forces beneath me. Tectonic activity deep within the earth was heating the water that rose to the surface. I revelled in the warm bubbles rising against my skin and scanned the surroundings for elephants. Grassy evidence of their presence floated among the water lilies.

"Elephants do use the springs," explained guide Catherine Hoy, "but the water is too warm and sulphuric for hippos and crocodiles." For humans, the sulphur concentration is relatively low, sparing us the acrid smell of rotten eggs often associated with geothermal springs. It was pleasant to linger and reflect on the morning's sightings: Böhm's bee-eaters, reedbuck and a herd of maiestic sable.

These hot springs are part of a natural plumbing system fuelled by tectonic activity from the East African Rift Valley.

Where the Kafue River enters

Zambia's largest national park, the

Lubungu Hot Springs (the park's hottest) boil, while cooler

springs seep into smaller waterholes and streams throughout the park. The interplay of geology and water creates a dry season refuge, providing minerals and salts.

More broadly, water — vast rivers and sprawling wetlands fed by dramatic rainfall — shapes life in this vast, wild park, from the teeming swamps of the Busanga Plains in the far north to Lake Itezhi-Tezhi in the south.

The Kafue River drains a 155,000sq km basin and discharges 10 cubic kilometres of water annually into the Zambezi. "It plays a disproportionate role in the hydrology of the entire system," said Bruce Ellender, Kafue Conservation Director for The Nature Conservancy.

The Kafue forms the park's eastern boundary between Hook Bridge — a visitor access point — and Itezhi-Tezhi. Flying into Chunga Airstrip at the start of my safari, I glimpsed rapids, islands and hippos. Storm clouds signalled the arrival of summer rains.

"Kafue National Park is not just shaped by its seasons; it thrives because of them," said African Parks' Craig Reid, who manages the park for the large conservation nonprofit. Seasonal flooding sustains the park's diversity, including herds of elephants, thriving predators, abundant fish... and 50 per cent of Zambia's human population, who rely on this hard-working river.

"The Kafue anchors both Kavango Zambezi's and Zambia's future," said Reid. "Beyond wildlife and tourism, it sustains livelihoods through fishing, agriculture and hydropower."

The annual rains, which range from 600mm in the south to 1200 mm in the north, transform the park into an inaccessible waterscape for months each year. They also make it one of the best wildlife destinations in the world, especially in areas like Busanga and Nanzhila Plains, but also in less well-known regions.

"I don't give my guests breakfast until we've seen lions," joked guide Chris Ndlovu of Mozhi Bush Camp as he drove us into Busanga Plains. We saw three lions before 9am.

These seasonal wetlands (and the Kafue Flats and Lukanga Swamp) become critical fish nurseries and breeding grounds for amphibians and thousands of birds like slaty egrets and Caspian plovers. They trap sediments, absorb nutrients, regulate river flows and sustain ecosystems downstream.

But at the tail end of the dry season, they become golden plains and every palm grove, papyrus reed bed and lagoon teems with life. The drying landscape supports vast herds of red lechwe, puku, buffalo, wildebeest, Lichtenstein's hartebeest, Defassa waterbuck, and sable and roan antelope. Birdlife is equally abundant: there are wattled cranes, grey-crowned cranes, rosy-throated longclaws, open-bill storks, fish eagles...

Elsewhere, water percolates into *dambos* (seasonally waterlogged depressions) and filters into rivers and wetlands. "Because of their clay soils, dambos are never completely dry," explained James Mulenga of Classic Zambia's Musekese Camp. From this unfenced camp, adjacent to a lagoon aptly named Eden, I watched Meyer's parrots and Malbrouck monkeys chatter in mangosteen trees while lions stalked puku.

And it's not just lions: leopard sightings are frequent too. On a late afternoon boat cruise on the Lunga River, our guide, Everisto Kambobe from Northern Kafue Safaris, pointed out Schalow's turacos and a green-backed heron then... leopard! A dappled beauty appeared, and we followed her in the boat for kilometres as she wound along the bank, pausing to drink before vanishing into the thicket of root systems

KAFUE IN NUMBERS:

Zambia's largest park, spanning **22,480sq km**

With Game Management Areas, the Greater Kafue landscape covers **68,000sg km**

Contains over 2000km of roads

42 elephants collared

30-60 black rhino to be translocated in 2026

1600 wildebeest and 300 zebra to be translocated from Liuwa Plain NP in 2025

In 2023, **113 poachers and 188 illegal fishermen** arrested

In 2023, **295 snares, 46 firearms** and **76 bicycles** confiscated

500,000 people living in Game Management Areas beside the NP

One 6-star lodge (Anantara) to open in 2025

Tourism revenue of **US\$1.8 million** projected for 2024

Tourism projected to increase by **100 per cent** within 5 years



KAVANGO ZAMBEZI





Nada IIIW / Svul Pudrodalia IIIW

MARCUS WESTBERG / AFRICAN PARKS

that sculpt and contain the riverbanks.

"I often see leopards on the bank," said guide John Handula during another river excursion, this one on a mirror-like stretch of the Kafue, disturbed only by jumping fish and surfacing hippos. I'm never entirely comfortable surrounded by these large amphibious mammals, but I grew increasingly confident in John's company. "They are my fishing companions," he said, pointing out spots where he catches three-spot tilapia, largemouth bream and yellow-belly bream.

The Wilderness Project recently conducted a 1620km health assessment of the Kafue River, from its source to the Zambezi confluence, on foot and by canoe. Over 82 days, they encountered 2394 hippos — 98 per cent of which were within Kafue National Park and the contiguous Mushingashi Conservancy. Meanwhile, The Nature Conservancy supported Kafue's first comprehensive fish diversity survey, identifying more than 70 species, including several forms of existing species or subspecies yet to be described.

Recreational anglers visiting Kafue National Park can catch and release fish, including the endemic and feisty Kafue pike. The system also supports thriving fisheries and subsistence fishers. "Across the entire system, we're looking at more than 6000 people with fishery-focused livelihoods, and even more during times of need." said Ellender.

Some local communities also exercise their traditional right to fish in the park, like the villagers we encountered during a drive near Mozhi Bush Camp, located at the confluence of the Lufupa and Moshi rivers. "They're very brave," noted guide Ndlovu, explaining how they sleep in the wild while waiting for their traditional weir fish traps to fill.

Away from the rivers, the landscape was studded with snouted termite mounds, safeguarding nature's most sophisticated architects and other small animals from rising water. The mounds were interspersed with waterberry trees, growing low, almost like ground creepers, adapted to the park's fire cycle. Fire, like water, plays a significant role in this habitat, influencing Kafue's water systems by affecting soil permeability and vegetation cover.



wildlife in Busanga Plains; guide James Mulenga from Musekese Camp

Left, bottom two: North to south. Male lion spotted on safari at Wilderness' Busanga Bush Camp in the northern reaches; puku by Lake Itezhi-Tezhi in the south.

Above: Plain's game. Red lechwe congregate around the water channels near Busanga Plains Camp Right: Watery wilderness. Konkamoya is one of only a couple of safari lodges on Lake Itezhi-Tezhi Right bottom: Activity centre. An African Parks' operational base near the Kafue River

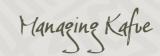
Later, we drove through miombo woodlands — a study in aubergine, coral, red, emerald, lime and mustard — and saw herds of sable and roan, Arnot's chats and a black-chested snake eagle. But in Kafue, you're never far from water.

I spent my final day back alongside the Kafue at Green Safaris' Ila Safari Lodge. Here, the river is broad and deep, fringed by jackalberries, sycamore figs, winterthorns, African mahogany and ubiquitous water pears. Over lunch (using ingredients fresh from the lodge's organic garden) served on their electric boat, I watched elephants swim to a soundtrack of hippo grunts and the haunting cries of fish eagles. Elsewhere, resistant rock formations create braided rapids and waterfalls, while softer sedimentary layers allow for wider, slower-flowing sections.

It had rained overnight, and soon Kafue's mighty rivers would again be part of a vast, watery sanctuary.







In 2022 the Zambian government invited African Parks to co-manage Kafue National Park. Sue Watt spoke to the NGO's Park Manager **Craig Reid** about AP's progress and plans.

WHY DID KAFUE INTEREST AFRICAN PARKS?

For years, Kafue had suffered from poaching for bushmeat. When we first started patrols, we flew over major pathways where poachers on bicycles were ferrying meat out. It's one of Africa's biggest parks and had various NGO interventions, but nobody supported the whole park. It needed a partner who could work at scale and do everything required.

The great thing is there is space for everyone. Conservation NGOs monitoring wildlife are still here, helping to inform management decisions. Law enforcement NGOs have moved into Game Management Areas (GMAs) bordering the park, providing further protection.

WHAT WORK WAS NEEDED?

Managing this vast park demands huge infrastructure. We divided it into five sectors, each roughly 500,000 hectares. Over 2000 kilometres of roads need grading annually, as well as developing fences, bridges and camps. Our 400 new staff need homes, offices, internet, electricity and water, but we're making progress on all fronts.

WHAT ARE YOUR PRIORITIES?
We've employed almost 200 law enforcement officers, who, along with our GMA partners, have improved security significantly. As a result, operators are reporting the best wildlife viewing for years. This year, we're moving 1600 wildebeest and 300 zebra from Liuwa Plain, and we're bringing black rhino in 2026: we're working on their Intensive Protection Zone and security.

HOW ARE YOU WORKING WITH NEIGHBOURING COMMUNITIES? Some 500,000 people live in the GMAs; it's crucial they're part of Kafue's success. It's not the

typical African Parks scenario where we're the only NGO — we work collaboratively with others already operating here, especially The Nature Conservancy, who have a coordinating role engaging communities. Projects involve healthcare, education, conservation awareness and livelihoods. There's a major fishery worth US\$3-4 million annually, where some 2000 people fish, and we're working to ensure that's done sustainably. We've started literacy programmes and invested in school infrastructure.

CAN TOURISM MAKE KAFUE SUSTAINABLE WITHOUT DESTROYING ITS WILDERNESS? Tourism represents an amazing opportunity — revenues have doubled since we started. We inherited negotiations for new concessions and for Anantara's six-star lodge opening this year. We're also developing a campsite in the south and potentially wild camping options for self-sufficient travellers.

We believe Kafue could be financially sustainable within 10 years, but the last thing we want is overtourism. All future tourism will be carefully planned to ensure good spacing between operators.

DOES KAVANGO ZAMBEZI MAKE A DIFFERENCE TO OPERATIONS? Being part of such a large protected area helps tourism, but it doesn't affect our day-to-day work. What is relevant is the broader vision and the bigger open system. Last dry season, a collared elephant walked from Kafue all the way to Botswana. The fact that kind of movement still happens is great. But it would be pointless protecting wildlife here which then gets poached elsewhere. In the future. this broader security scenario will become increasingly important.