

The Watson Files- The Key to Saving Somalia is Gathering Dust in the British Countryside



Feature

What if there were a blueprint for climate adaptation that could end a civil war? An English scientist spent his life developing one — then he vanished without a trace.

By Laura Heaton | Photographs by Nichole Sobecki |

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After sunrise on April 1, 2008, the renowned English ecologist Murray Watson left the Saakow Hotel, a modest concrete guesthouse in rural southern Somalia, heading off for work in a Nissan Patrol. He and a Kenyan colleague, an engineer named Patrick Amukhuma, along with a translator and two guards, were on their way to finish up a survey of flood-prone areas for the United Nations using an aerial and ground survey technique Watson had pioneered decades earlier.

One of the more lush regions in a largely arid country, the area covered by Watson's survey was also among the most

hazardous. It was crawling with al-Shabab extremists, who had taken to extorting the banana and sugarcane farms that unfurled along the banks of the Shabelle and Jubba rivers. Increasingly erratic rainfall, a phenomenon scientists have linked to climate change, was further threatening the farms by causing frequent floods that Watson hoped his survey could help mitigate. Though the 69-year-old Englishman wouldn't have described it as such, he was leading a groundbreaking climate adaptation effort in a country that is among the most vulnerable to climate change — and to the conflict that often follows in its wake.

Watson knew the dangers of working in this region, but over the years he had honed a set of instincts that usually kept him out of harm's way. He had lived in Somalia on and off for more than a decade (from the late 1970s until the government collapsed in 1991), spoke basic Somali, and was married to a Somali-Kenyan woman. He was fluent in the country's ever-shifting power dynamics. But no amount of local knowledge could have saved him that spring morning.



Watson with his Piper Super Cub bush plane. (Courtesy of a friend to the Watson family)

About an hour after they left the hotel, as they bumped along a dirt road that ran parallel to the Jubba River, Watson and Amukhuma came upon a vehicle blocking their path. Six gunmen lay in wait. The driver attempted an evasive U-turn but got stuck in a gully as the attackers opened fire. Watson was hit, and blood soaked through the sleeve of his shirt. One of the guards surrendered his weapon; the other fled on foot after firing a few rounds. The gunmen tied up the driver and translator, leaving them behind. Then they pushed Watson and Amukhuma into the car and sped off deeper into the wilderness.

One of the guards managed to call the Saakow Hotel and a band of local militia quickly mobilized to search for the researchers. When they got to the scene of the ambush, they found Watson's

driver, the translator, and the guards. The kidnappers and their victims were long gone.

For days, authorities from Britain's embassy in neighboring Kenya worked to track them down. So did a number of Watson's friends and acquaintances, including the veteran BBC reporter Owen Bennett-Jones, who was based in London but had contacts at the BBC Somali Service. The Brits sent at least two search parties to case the area around Jilib — a town where they believed he was being held, about 100 miles south of Saakow — and assess the feasibility of an extraction, but they were never able to establish exactly where the kidnappers were holding Watson.

“Watson's family couldn't pay, his country wouldn't, and the trail has been quiet ever since.

A few days after the abduction, Bennett-Jones started getting calls from a Somali man who spoke excellent English and claimed to be a negotiator for the kidnappers, whom the journalist by then believed to be members of al-Shabab. The man's demands ranged from \$2 million to \$4 million for the ecologist's safe return. Watson's family couldn't pay, his country wouldn't, and the trail has been quiet ever since. No group has claimed his killing. No remains have ever been found.

For years after the kidnapping, the small cadre of environmentalists still working in Somalia had assumed that decades' worth of scientific knowledge compiled by Watson had also been lost. Without vital land surveys that vanished during the civil war, it would be hard to determine precisely how or at what rate the country's climate was changing — and therefore difficult to design measures that could limit the damage. But a recent discovery, made more than 4,000 miles

away in Britain, has suddenly resurrected the possibility of continuing Watson's environmental work. It has also revealed the extent to which his legacy may be intertwined with the fate of Somalia itself.



Left: Watson and his researchers stand on a tarmac in Somalia. Right: Watson stands beside one of his company's vehicles at the Qardho airstrip in 1980. (Courtesy of a friend to the Watson family)

Somalia is a country long beset by extremes. In its harsh and arid scrublands, where temperatures can exceed 110 degrees Fahrenheit, nomadic people eke out a living on just inches of rainfall each year. The margin for survival is razor thin, and drought has often sparked bloody conflict over livestock and other resources. When the rains fail, herds of camels and goats wither and die, often wiping out the communities that depend on them. Somalis “give names to the droughts, and they give names to the wars,” said Abdullahi Ahmed Karani, whose work as one of Somalia's pioneering environmentalists spanned too many of both.

It was a massive drought that propelled Karani, who is now almost 80, into the job that defined his career. Somalia typically has two wet seasons each year: The long rains, *gu*, last from April to June and the *deyr* from October to November. But in 1974 and 1975, the rains never came. The Dabadheer drought, as it became known, translates to “the long-tailed one,” because “it stayed for a long time,” Karani explained. Some 19,000 people starved to death, and a quarter-million nomads lost most of their livestock, leaving them destitute.

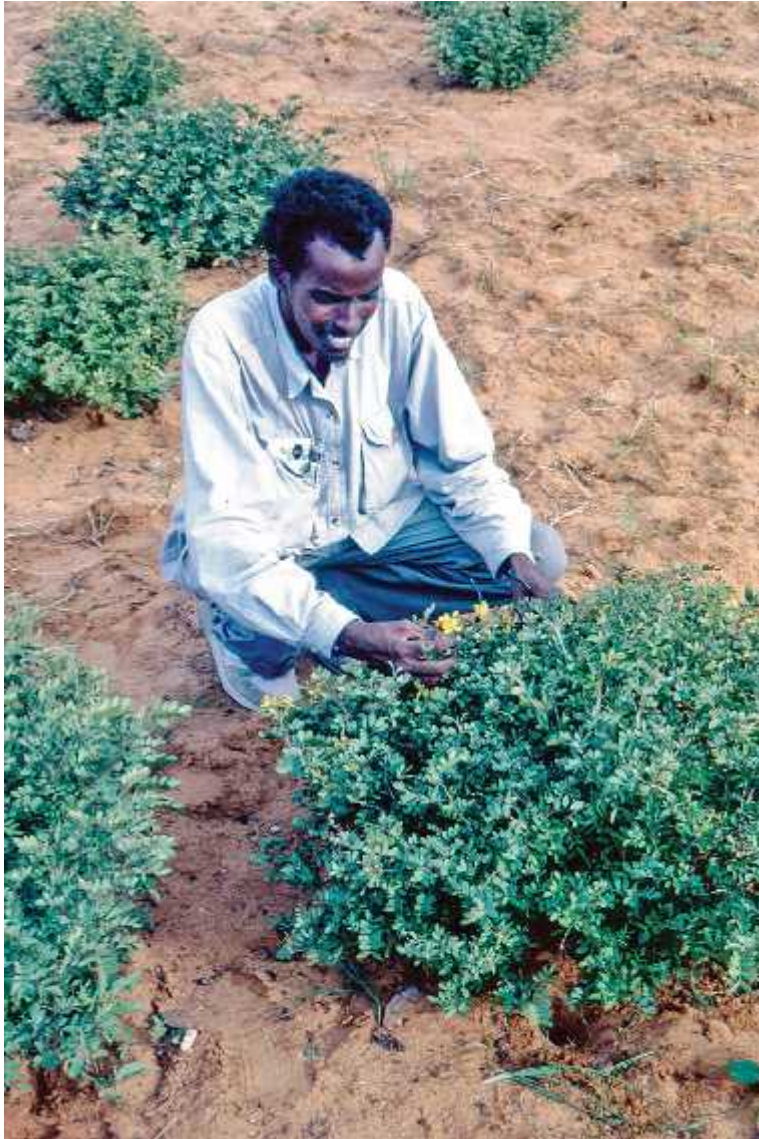
After the Dabadheer drought, Somalia’s president, the Marxist-Leninist military leader Siad Barre, decided that more needed to be done to help people cope with recurring dry spells; they should be prepared for the next inevitable drought. So Barre established the National Range Agency to spearhead conservation efforts, and he tapped Karani to run it. Housed in a beautiful building with arching arabesque corridors, the agency established the country’s first national parks, most famously the Lag Badana National Park in the fertile southern region, where the Jubba River sustained old-growth forests and visitors could see giraffes, elephants, and lions. The agency also protected pastures from overgrazing and banned charcoal exports in order to protect trees. “He was a dictator — I know that,” Karani said of Barre. “But actually he was doing very good things [for the environment].”

Under Karani’s leadership, the National Range Agency blossomed from a tiny organization with just one Somali forestry specialist to a government agency with about 2,000 people on its payroll by 1988. The agency put 3,000 more employees to work in the countryside on forestry and sand dunes projects in exchange for food rations. Karani’s goal was to get all Somalis to see conservation as their duty: Environment Day was celebrated three times a year, with the main event in April, the start of the rainy season. Throngs would

gather at the National Theatre in Mogadishu to hear Barre's annual speech about the value of trees, and the following morning, people would turn out to public spaces in their neighborhoods to plant seedlings.

Like other government agencies, the National Range Agency benefited from Somalia's Cold War alliance with the United States, which channeled hundreds of millions of dollars into Barre's coffers. Leading researchers and technicians from around the world were drawn to the work — botanists from Pakistan and Sweden, Indian forestry managers, a Canadian ecologist. Donor countries sent staff to projects housed at the agency, and foreign universities set up partnerships. A young Somali named Abdi Dahir, who had studied plant curation at the Royal Botanic Gardens in London, came home to direct the new national herbarium that contained 50,000 plant specimens, all displayed in wooden boxes.

Of all the international experts attracted to the National Range Agency, a Cambridge University-educated British ecologist stayed the longest. With his mop of curly hair, signature khaki vest, and a penchant for flying low over the savannah in his Piper Super Cub bush plane, Murray Watson had already made a name for himself in Africa, tracking herds of wildebeest in Tanzania and hippos in Zambia. But it was Somalia that captured and held his fascination.



Abdi Dahir, the former director of the herbarium in Mogadishu, inspects a yeheb nut bush during a research trip in the mid-1980s. (Courtesy of Mats Thulin)

Watson arrived in Mogadishu in 1978, just as the National Range Agency was starting its work. Through much of the 1980s, he led a small team of scientists who, with international funding and Soviet maps, carried out the most comprehensive land and natural resource survey of Somalia ever completed.

Watson took his work seriously, and he expected diligence and even perfection from his researchers. In many ways, he was like a strict father: On the rare occasions they returned from the field

to stay in Mogadishu — then a cosmopolitan hub known as the “pearl” of the Indian Ocean — cavorting with other expats was discouraged. But rather than alienate his team, Watson’s dogged commitment won him their fierce loyalty. There was also a lighter, irreverent side to him. During the 1970s, he appeared on Jacques Cousteau’s hit adventure television series, which featured Watson in his element, studying hippos in Lake Tanganyika in Zambia. As the crew unveiled a life-sized hippo costume intended for the photographers who were attempting to get close to the animals, Cousteau asked Watson for his expert opinion on the suit. The scientist’s grin broadened as he confirmed that the plastic hippo appeared to be female. “If I was a hippo, at 10 meters, I’d consider this one of the more attractive specimens,” he said. “So whoever’s in the back better be ready for action.”

Watson engaged easily with all types, possessing a kind of dynamism that won him a vast social circle. He was friendly with British commandos, with whom he loved to talk aviation; Somali elites including President Barre’s son; and even the future militia leader Mohammed Farah Aidid, whom American soldiers would target in the infamous “Black Hawk Down” operation in 1993. But he was close to few aside from his researchers. Together, Watson and his team crisscrossed the country by Land Rover and airplane to document the environment in minute detail at some 1,400 sites. They divvied up tasks by specialization — flora, water, soil, wildlife — and produced intricate, hand-drawn maps of vegetation and topography, conducted a census of livestock, gathered thousands of samples of flora and soil, and took nearly 10,000 slides and photographs. Though they didn’t know it at the time, they were creating a detailed record of a place on the cusp of calamity.

Somalia’s 30-Year Slide

The diptychs below juxtapose images taken from Watson's land surveys of Somalia (on the left) against images of these same sites taken decades later by photographer Nichole Sobecki.

Abdirisak Ali was a 20-something-year-old soil analyst at the National Range Agency when he flew his first mission with Watson. Ali had never been on an airplane before, and his stomach leapt as Watson banked low along the Indian Ocean, snapping aerial photographs of the coastal vegetation on his Olympus OM-1 camera. The day was sunny and windy, and the Cessna bounced to a landing near the town of Hobyo.

There was no airport, just acres of sand and scrub. The team set up camp and relaxed. But Watson didn't join them, recalled Ali, who at 61 is now a leading environmental consultant in Somalia. Instead, he worked late into the evening, using a ruler, a compass, and a Rotring technical pen to make detailed maps of the region they had just surveyed.

Ali was impressed with Watson's discipline, and he resolved to learn as much as he could from the senior scientist. They worked together on more missions, and Ali's admiration for Watson grew. He became a friend and a mentor, encouraging Ali to pursue a master's degree at New Mexico State University in the United States before returning to the National Range Agency in the late 1980s. Watson was also the rare foreigner whom even Somali elders respected. After he and his team had surveyed a given region, they would always show local authorities their maps. When Ali approached them, community elders would sometimes ask, "Who gave you our names? How did you get our wells, our mountains, our valleys?" When Ali would reply that a British man was doing this work, they were often stunned in disbelief: How could an outsider know the land as intimately as they did?

As the 1980s wore on, political turmoil began to overshadow the work of the National Range Agency. Barre, whose reign had long been characterized by discrimination along clan lines and suppression of dissent, began a brutal counterinsurgency campaign to stamp out potential threats to his rule. The government engaged in wanton bombings and indiscriminate killings of civilians. During this period, hundreds of thousands of Somalis fled their homes. As reports emerged of Barre's abuses, donors began pulling their support for his government. The United States slashed its annual aid to Somalia from \$100 million in the mid-1980s to less than \$9 million in 1989.

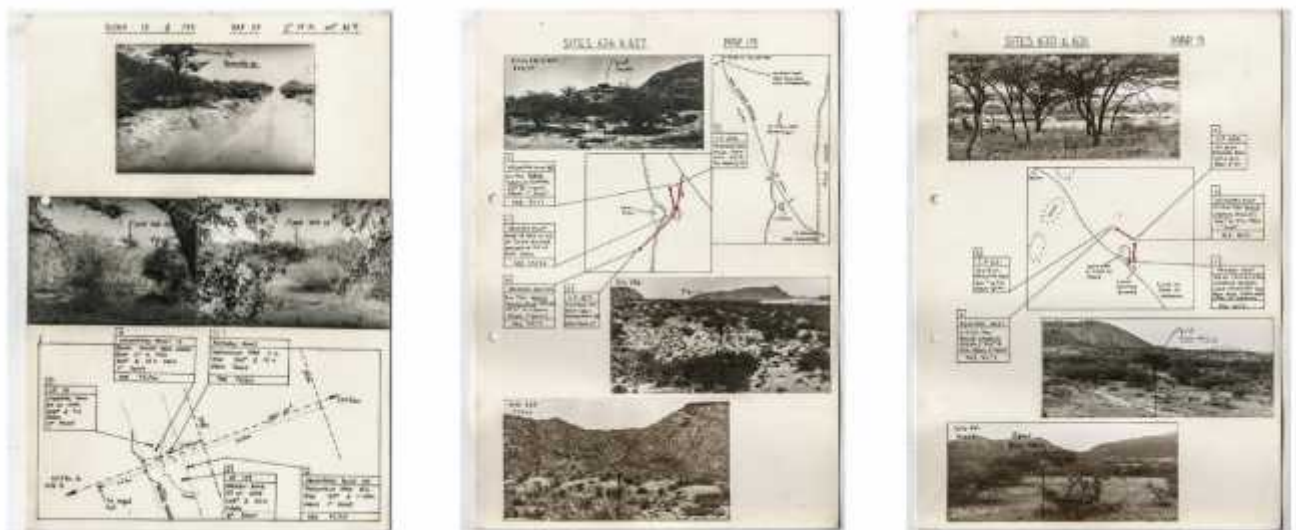
"Clearly the present situation is a disaster-in-waiting," Watson wrote in a typed memo dated Dec. 27, 1990, that he mailed to donor contacts in Western countries. A loosely aligned coalition of rebel groups was gaining against Barre's forces. Thousands of people had died in street battles in the capital. "The future holds little hope of a rapid return to proper governance," Watson predicted in the same memo.

Watson's pessimism would prove an understatement. On Jan. 26, 1991, after a month of intense fighting, rebels stormed the presidential palace in Mogadishu and brought Barre's 21-year rule to an end. Watson, one of the few foreigners still in the country, called the BBC with an eyewitness report that aired the day after the coup. "You cannot imagine the carnage that the president ... is wreaking on his own people," he said over a rasping phone line. "I took some photographs of bodies in the street just now. There are not so many bodies in the street because the dogs have eaten most of them, but there's still hands sticking through the sand."

Soon after the president fell, the rebels turned on one another and destroyed huge swaths of Mogadishu. Footage Watson shot on his camcorder shows residential blocks reduced to rubble;

pickup trucks loaded with heavily armed rebels careening past burned-out cars; a lone fighter wandering through the wreckage of a government building, documents littering the floor and blowing through its abandoned corridors. The National Range Agency — its elegant building nestled between foreign embassies in an upscale part of town — met the same fate. On the ground floor, the herbarium was looted and burned; Dahir's neat wooden boxes lay crushed.

“Nothing exists today,” Karani said. “Everything after the war, the civil war in Somalia, was...” He couldn't finish the sentence. “That makes me very sad. That's why I never talk about those things, because what we built was demolished.”



Field notes from Watson's land surveys, including photographs and hand-drawn maps. (Courtesy of Resource Management and Research)

Somalia is often cited as the longest-running real-world example of anarchy, from the coup in 1991 until 2006, when a federation of Islamic courts took control of the southern half of the country and briefly imposed order. But the Islamic Courts Union, as the group was known, governed by sharia, or Islamic law — a shock to Somalia's more moderate Muslim

sensibilities — and some of its elements had ties to al Qaeda. That made neighboring Ethiopia and the United States deeply uneasy. The United States backed Ethiopia's invasion of Somalia in 2006, plunging the country back into a civil war from which it has yet to emerge. Today, those elements of the Islamic Courts Union that most worried the United States continue to fight under a familiar moniker: al-Shabab.

The environmental work headed up by the National Range Agency has long since come to a halt. Karani fled Mogadishu in 1991. He made his way to a refugee camp in Kenya and eventually on to India, where his children re-enrolled in school. Ali also ended up in a refugee camp in Kenya, resigned to the fact that environmental work wouldn't be a priority. "These people were just a bunch of gangs," he said of the various factions vying for control of Mogadishu throughout the 1990s and early 2000s. They were not interested in land management. Watson stayed in Somalia until 1992, working on a nutrition survey as the country was wracked by famine. Finally, when it became clear his scientific expertise was being ignored, he moved to Laos and restarted his surveying business there under the name Resource Management and Research. Several of his devoted researchers went with him.

Watch this Video: <https://vimeo.com/219507981>

Writer Laura Heaton and photographer Nichole Sobecki created this short film (produced by The GroundTruth Project's initiative, "Living Proof: The Human Toll of Climate Change"), to offer a deeper view of how climate change is an underlying cause of displacement, migration, and violence in Somalia.

As the years passed and Somalia descended further into chaos, no one enforced the ban on charcoal production that was designed to halt deforestation. No one monitored pasturelands to prevent overgrazing. And no one noticed when an old Barre-era project aimed at stopping erosion — by introducing an invasive species of mesquite — went haywire and snuffed out indigenous plants across hundreds of thousands of acres. Most large mammals migrated or died, as war and environmental degradation ravaged their habitats. Illegal fishing and toxic waste dumping increased as foreign companies took advantage of Somalia's lawless waters.

In a punishing confluence, climate scientists also recorded a persistent drop in rainfall during these years, especially the spring gu rains that are vital for agriculture. Meanwhile, the warming of water and atmospheric currents in and over the Indian and western Pacific Ocean contributed to more frequent drought across East Africa. Somalia's relatively flat landscape leaves it even worse off than its neighbors, Kenya and Ethiopia, which can reliably expect to get at least some rain in mountainous areas where clouds get trapped among the peaks.

The link between climate change and conflict is still poorly understood. But last year, the African Union's Peace and Security Council held a session on climate change, warning that the warming of the planet was a potential trigger for intercommunal violence. U.N. experts have reached a similar conclusion, as has the U.S. Defense Department, which in a 2014 strategy document referred to climate change as a "threat multiplier" because of its potential to exacerbate everything "from infectious disease to terrorism." In Somalia, where fishermen-turned-pirates troll the coastline looking for cargo ships to hold hostage and farmers-turned-insurgents menace civilians on land, these reports simply confirm the obvious. "The fact [is] that many of our youth have lost jobs because of

desertification, deforestation,” said Buri Hamza, who served as Somalia’s top environmental official. “This is one of the major causes of radicalization.”

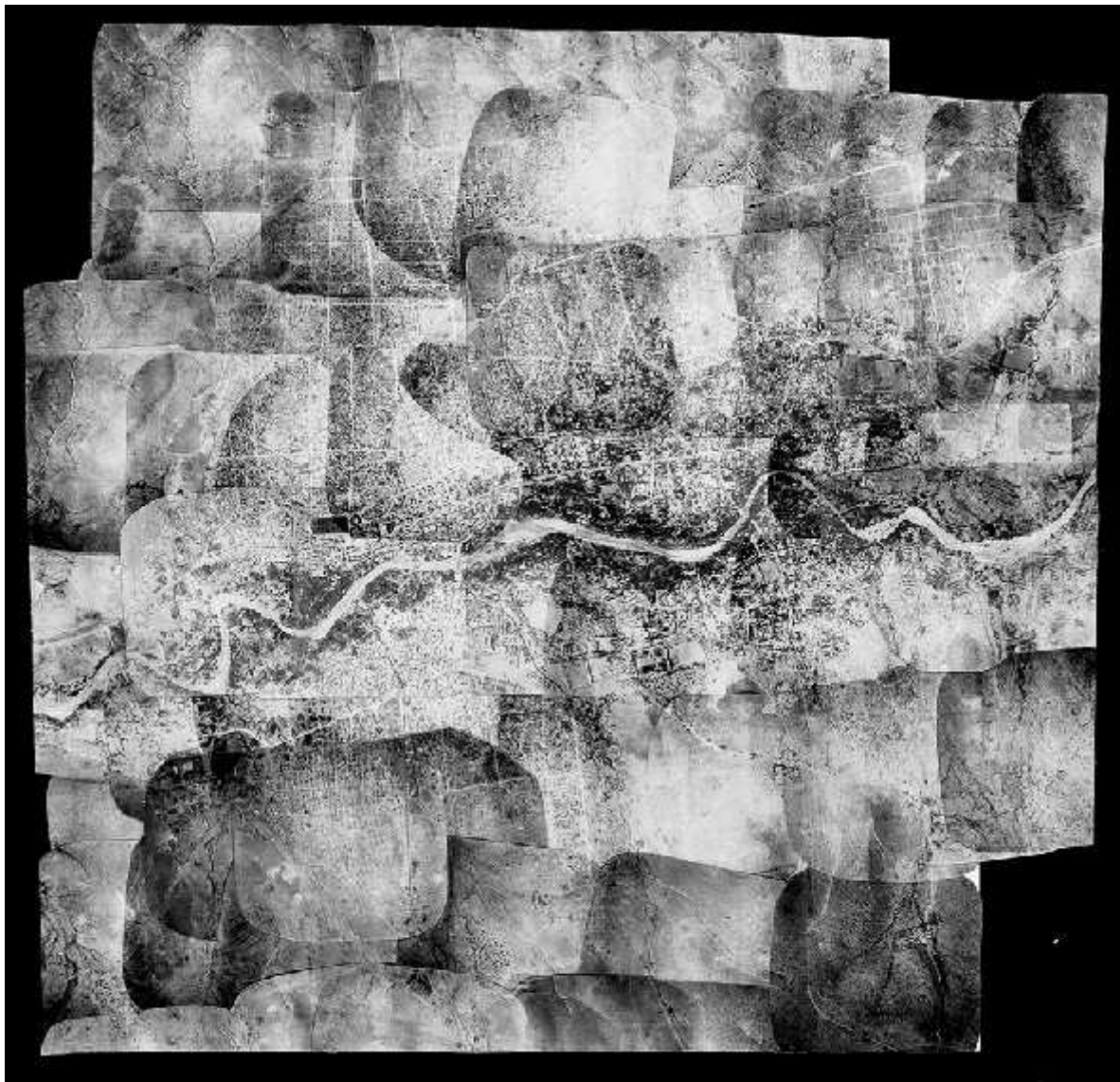


An aerial photo of livestock grazing on plentiful green pasture, from Watson’s 1980s files. (Courtesy of Resource Management and Research)

Before he left in 1992, Watson carried out the most daring mission of his career — and perhaps his greatest service to Somalia. With the wholesale looting of government agencies underway, and much of Mogadishu in ruins, he quietly packed up the records of his land surveys — photographs and slides,

maps, field notes, and natural resource reports, thousands of documents in total — and spirited them out of the country. He let Karani in on the plan, but few outside his inner circle knew. Exfiltrating state documents would have been a serious offense had the government still been functioning, and doing so meant traversing territory controlled by unpredictable warlords.

“Watson was telling me that he was saving something important to Somalia, something very valuable,” Karani recalled a quarter-century later. “I told him I felt safe knowing those documents were with him. Otherwise, like everything, all other documents — nothing would have been left.”



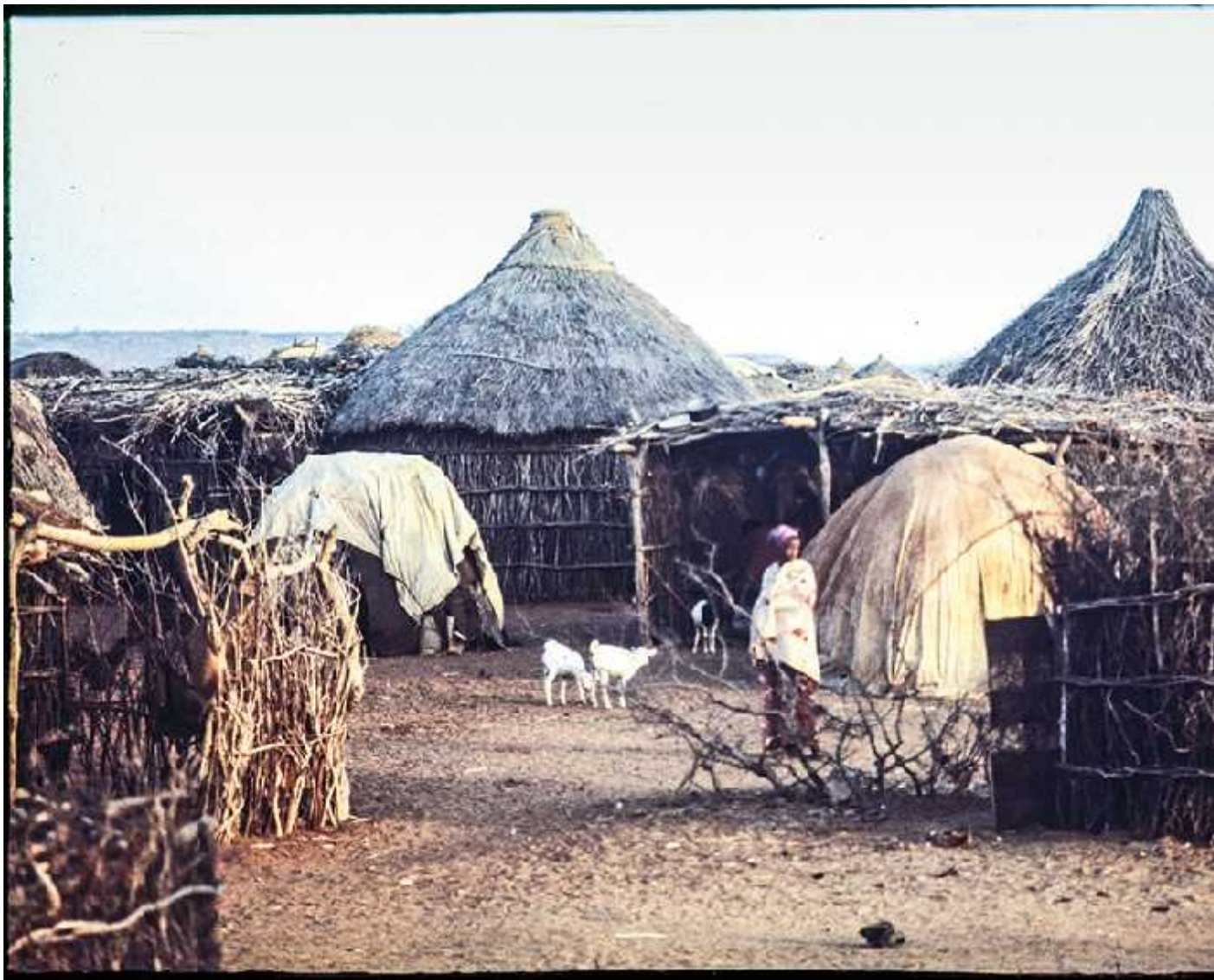
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– Abdullah Ahmed Karani, who ran the National Range Agency for more than a decade, on Watson’s decision to take his survey work – which included aerial photographs pieced together to create pre-satellite cityscapes, like the photo above of Hargeisa – out of Somalia in 1992 to save it. (Courtesy of Resource Management and Research)

How exactly Watson moved the survey documents out of Somalia remains a mystery, though it seems likely he flew them into Kenya in a bush plane. Eventually, Watson brought them to Britain, where one of his most trusted researchers stored them in her attic. For more than a quarter-century, Watson’s work sat there gathering dust, untouched in carefully labeled boxes and binders. Over the years, word of their existence spread to a small group of environmental researchers, most of them employed by the United Nations, but few inside Somalia knew that the blueprint for understanding how and why the environment was changing — and, possibly, for reversing the damage — had survived.

On an unusually sunny morning in 2015, I visited Watson’s former researcher at her home in the British countryside. (She asked not to be named.) We spent hours in her study flipping through Watson’s field notes, poring over his maps and photographs. Held up to a light, his old slides offer a glimpse into another time: broad, hundred-year-old trees in southern Somalia, vines creating a thick canopy over the road, Mogadishu’s cathedral — now an iconic ruin — intact and majestic.

Months later, at a café in the Somali city of Garowe, I told Ali what I'd seen. He was quiet at first as the news set in. Then he spent the rest of our interview quizzing me about the contents of the attic, almost as if he didn't believe the survey documents had survived.



A photo of traditional Somali homes and livestock pens, from Watson's 1980s files. (Courtesy of Resource Management and Research)

The road through the Cal Madow Mountains, home to the highest peaks in Somalia, snakes through highland juniper forests bounded by dramatic limestone cliffs. When Watson

traveled along this route in 1981, likely in his gray Land Rover, the junipers were interspersed with abundant candelabra trees, their thick, succulent branches reaching skyward, as captured in the slides he took that day. But as I drove along the escarpment 35 years later, I couldn't find a single candelabra tree. Most had died out long before, locals said, as the earth dried up and people fed branches from the remaining trees to their camels. Near a cluster of houses made from skinny logs and blue corrugated metal, I stopped to ask if even a single candelabra remained: A man selling coffee pointed toward two trees in the distance, one of which had lost all of its branches. Those were the very last, he said.

But it wasn't candelabras that had drawn me to the Cal Madow Mountains; it was a murder. In the plains that slope gently down from the range, where the deep jangle of hand-carved wooden bells announces roving herds of camels, violent clashes have grown more frequent as pastoralists increasingly abandon their traditional migration routes in search of water and pasture. When they encroach on the lands of settled farmers, as they did near the town of Aynabo about two weeks before I arrived, bloodshed often follows.

The community there is built around a single well. A few small farms — each just several rows of beanstalks, watermelon, and tomatoes — pump their water from it through hoses connected to a central generator, which the farmers invested in together. The population, which for most of the year is small enough to squeeze into a handful of dome-shaped houses made of wood, reeds, and cloth, swells slightly when nomads arrive in anticipation of the rains. Last year, a pastoralist named Mohamed sought to graze his herd on a patch of land claimed by another member of the community. With most of the pastures barren and the rains still weeks away, both men knew the survival of their animals hung in the balance.

“Both men lived in the same area. They’d had a fight before, and the shooter went to the victim’s family to resolve the conflict, but none acknowledged his arguments,” said Ali Yusef Adan, a muscular farmer in a white tank top and loosely laced boots. Adan is a cousin of both the shooter and the victim. “The shooting came from that direction,” he said, gesturing to a desolate clearing still strewn with empty cartridges. “He fired four bullets, and two of them hit the man.”

Adan’s father was a nomad, but as he grew older, persistent lack of rainfall made that lifestyle increasingly difficult. When Adan inherited his father’s livestock after his death, he decided to settle and start a farm. It wasn’t an easy decision. Claiming plots of land goes against tradition in many Somali communities, and Adan realized that doing so might cause friction with members of his own family. “Fencing of land and [claiming of] water are the major factors that start conflict,” he said.

Adan worries about the cycle of violence that his cousin’s killing could spark. Some of the men in his family have gone in search of the shooter, who fled right after the incident. Tradition dictates that there must be restitution for Mohamed’s family. If the shooter doesn’t return — alive or dead — someone else will likely be killed. Revenge is a powerful force in the way justice is practiced in Somalia, far beyond the reach of the state. “Cases like this are becoming more and more common, which worries me,” said Farax Arab, a health worker who prepared Mohamed’s death certificate. “It’s like a chain. It goes on and on.”

Across the country, the cycle of retribution often plays out between clans in an intricate pattern of revenge killings. Twenty years from now, if tit-for-tat killings escalate in the wake of Mohamed’s death, few will remember that a grazing dispute was the cause of the first bloodshed.



Left: Abdirisak Ali, the former Watson acolyte, in an office where he worked in Garowe, the capital of the semi-autonomous region of Puntland. Right: Abdullahi Ahmed Karani, who ran the National Range Agency for more than a decade, in Nairobi's Karura Forest in April. (Photo credit: Nichole Sobecki)

Many of those who fled Somalia during its quarter-century civil war never returned, making new lives as migrants and refugees abroad. But as the country inches toward stability — the transitional government became a permanent one in 2012, and al-Shabab has been chased out of most cities — some have started to trickle back. A small group of environmentalists, some of whom got their start at the National Range Agency, is trying to revive the conservation work that began there.

Watson returned to Somalia to undertake the fateful survey of the Jubba and Shabelle rivers. Abdi Dahir, who long ago directed the herbarium in Mogadishu, came back briefly in 1994 to work on a survey of Somali flora and then moved home

permanently in 2012, joining an aid group called Adeso that focuses on environmental projects. Abdirisak Ali, Watson's former acolyte, also returned, serving from 2014 to 2016 as the director-general of the Ministry of Environment, Wildlife, and Tourism in Puntland, one of Somalia's semi-autonomous states in the northeast. Later, he was offered another prestigious ministerial post but turned it down in order to continue working as a consultant on environmental projects. Ali worries that the overwhelming focus on security issues means that the Somali government and its international backers are treating the symptoms rather than the causes of the violence. "Yes, we need the military. We need the police. But what are the root causes? What is actually driving this transformation in Somalia — the poverty, war, clan conflicts?" he said. "And I came to the conclusion: It's the natural resources."

“Environmental changes spark violence, and violence leads to further environmental destruction.

This is the vicious cycle Somalia's government finds itself locked in nearly a decade after Watson's disappearance: Environmental changes spark violence, and violence leads to further environmental destruction. Foreign governments and institutions, which gave \$1.3 billion in official development assistance last year, can be reticent to invest in environmental initiatives as long as bombings and assassinations are still a regular occurrence. Buri Hamza, Somalia's top environmental official at the time, told me last year that he struggled to get donors to come and witness the scale of the country's conservation crisis. "They say, 'Until you guys bring about security in your country, we won't really be able to come,'" Hamza said of international donors.

In June 2016, a month after we spoke, al-Shabab detonated a car bomb outside the Hotel Nasa Hablod in Mogadishu, where

Hamza had lived for the past eight years. Militants then stormed the complex, shooting civilians and taking hostages. At least 15 people were killed in the attack, including Hamza, who was crushed as the walls came tumbling down.

With Watson likely gone forever and the infrastructure that once supported his work in disarray, it has fallen to the next generation of Somali scientists to pick up the mantle and do what they can to help break this deadly cycle.

The trove of documents Watson left behind could prove the key to doing so — though it might seem odd or even crazy to place the hopes of a war-torn country on a decades-old land survey stashed in a house in the English countryside. But Watson's archive is both a unique historical record and a vital scientific resource, one that environmentalists believe can help them understand the impact of climate change in Somalia, begin to repair its degraded environment, and possibly to alleviate conflict.

“The potential is huge, because this kind of historical information is needed for any country — or any society — to understand processes of ecological change in some sort of systematic and dispassionate way, which is fundamental for effective resource management,” said Sean Fox, a lecturer in geography at the University of Bristol in Britain who is part of a team of scientists and historians studying the link between land degradation and conflict in Somalia. The field notes and photographs are especially valuable, he says, because they are the only known baseline data on vegetation, water, soil composition, and erosion. “To hear there's this potential gold mine of scientific information sitting in someone's attic.... It's just mind-boggling to us.”

Last summer, not long after I told him about Watson's archive in London, Ali traveled to the World Agroforestry Centre in Nairobi, Kenya, which has one of the largest collections of tree seeds in Africa. For months, he and one of the directors of the seed bank, Ramni Jamnadass, had been discussing the possibility of working together to reintroduce several extinct species of trees to Somalia, starting in some peaceful pockets of Puntland. One of the trees, the yeheb nut bush, was a kind of wonder plant that could survive in arid climates. It had yellow flowers that animals ate and nutritious nuts that fed humans. But without a record of where these plants had once thrived, and in precisely which conditions, they were planning to enlist the memory of local elders and draw on Ali's own recollections — a method that boiled down to guesswork and that both of them feared might fail. Now Ali had news to share.

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