

# INNOVATIVE FINANCING FOR LAND RESTORATION & DROUGHT RESILIENCE

An Implementation Playbook



**United Nations**  
Convention to Combat  
Desertification



The Nature  
Conservancy





# Contents

**EXECUTIVE SUMMARY ..... 3**

**SECTION 1: DROUGHT RESILIENCE ..... 4**

Case Study 1: SWIF: Private Equity for Climate-Adaptive Agriculture ..... 5

Case Study 2: The Cape Water Performance-Based Bond:Financing Nature as Infrastructure ..... 7

Case Study 3: DRIF: Building a Global Investment Facility for Drought Resilience ..... 9

Case Study 4: Transboundary Water Resilience in the Drin River Basin ..... 11

**SECTION 2: RANGELANDS & GRASSLANDS..... 13**

Case Study 1: Eternal Mongolia: Project Finance for Permanence ..... 14

Case Study 2: Restoring Rangelands in Northern Kenya and Northern Tanzania ..... 16

Case Study 3: STELARR: Unlocking Private Investment for Rangeland Restoration ..... 18

Case Study 4: Regenerating the Patagonian Steppe: The ESTEPPA Carbon Project ..... 20

**SECTION 3: LAND RESTORATION & SOIL HEALTH ..... 22**

Case Study 1: Green Credit Unions for Grassland Restoration in Mongolia ..... 23

Case Study 2: Redirecting Agricultural Finance in the Amazon, Cerrado, and Chaco ..... 25

Case Study 3: The Kenya Adaptation Finance Program: Finance for Regenerative Agriculture ..... 27

# Executive Summary

Around the world, land degradation and drought are accelerating—putting ecosystems, economies, and communities at risk. We know what works. The issue is not a lack of solutions—it is how we finance them.

Today, most funding is still short-term and reactive, arriving after crises instead of preventing them. If we want resilient landscapes and communities, we need to shift investment toward prevention, restoration, and long-term resilience. Investing before crises occur is not only more cost-effective than responding to disasters, it is essential for protecting food systems, water security, livelihoods, and long-term economic stability.

This Playbook is designed to do exactly that. The Financing for Land Restoration and Drought Resilience Playbook, developed with the United Nations Convention to Combat Desertification and partners including GIZ, GWP, ILRI, MNLF, and Enduring Earth, brings together financial solutions that are already working in practice. It is built for policymakers and practitioners who need to move from commitment to implementation—and scale what works. Ultimately, it demonstrates that financing land restoration is not an environmental cost, but a strategic investment in resilience, sustainable development and future prosperity.

The Playbook focuses on mechanisms delivering results:

- Blended finance and credit facilities that reduce risk and attract private capital
- Carbon finance and performance-based instruments that tie funding to outcomes
- Investment structures that move land projects from pilot to scale

These approaches show that regenerative agriculture, rangeland restoration, water security, and conservation can be financially viable at scale—while improving biodiversity, strengthening water systems, and advancing climate mitigation and adaptation. They also work for people—supporting local communities, producers, and pastoralists through stronger livelihoods, expanded access to finance and technical support, and more inclusive governance. Healthy land is the foundation of healthy food systems, and investing in restoration is ultimately an investment in people, prosperity, and resilience.



Yasmine Fouad, Executive Secretary, UNCCD  
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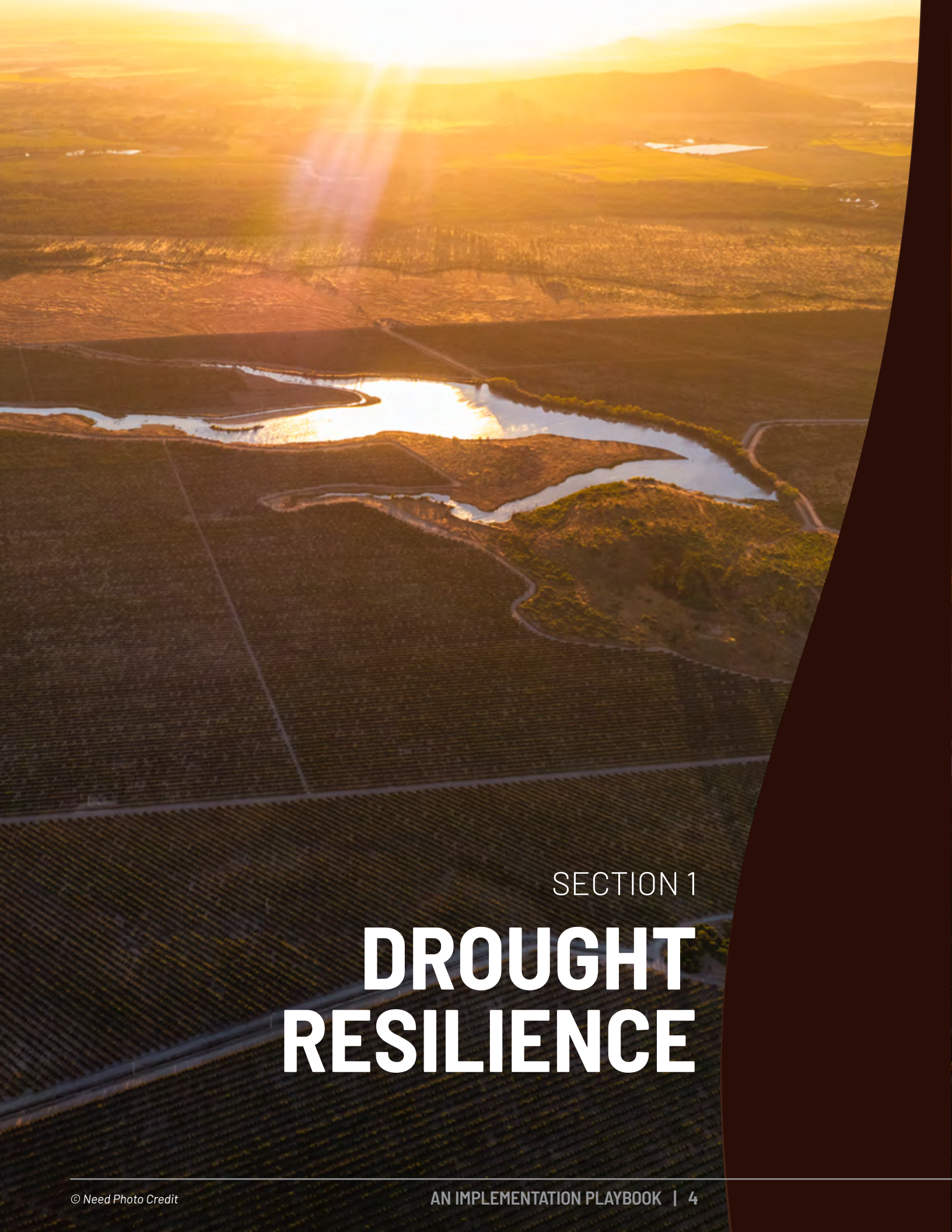
The Playbook draws on examples from across Africa, Asia, Europe, Latin America, and the United States—tested models designed to be replicated and scaled. Mongolia is one example. Through the Eternal Mongolia initiative, sustained, coordinated financing is helping protect large-scale ecosystems while strengthening community resilience and linking national ambition to long-term investment, with people at the center. These examples demonstrate that innovative finance is no longer a future aspiration; it is already delivering practical solutions that can be adapted and scaled across diverse landscapes and contexts.

This is not a collection of ideas. It is a practical guide to scaling finance for land restoration and drought resilience.

The models exist, and the capital can be mobilized. The opportunity now is to bring them together quickly and at a scale. At UNCCD COP17 and beyond, we can move from incremental progress to system-level change—aligning capital, policy, and implementation to close the gap between ambition and delivery and make land restoration and drought resilience investable realities. The challenge before us is no longer whether we can finance restoration, but whether we can mobilize the ambition, partnerships and investment needed to do so at the speed and scale this moment demands, strengthening food systems, supporting livelihoods, and building more resilient communities.



Jennifer Morris, CEO, The Nature Conservancy  
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An aerial photograph of a landscape at sunset. A river winds through the middle ground, reflecting the golden light of the sun. In the foreground, a large vineyard with rows of grapevines is visible. The background shows rolling hills and mountains under a hazy, orange sky. A dark, curved shape on the right side of the image serves as a design element.

## SECTION 1

# DROUGHT RESILIENCE



## CASE STUDY 1 DROUGHT RESILIENCE

# SWIF: Private Equity for Climate-Adaptive Agriculture

Biodiversity loss and climate disruption are no longer abstract risks to the global food system—they are active forces already reshaping it. Between 2023 and 2025, volatile climate events contributed to more than 140 instances of crop destruction worldwide. Agricultural systems built for stable, predictable conditions are encountering a world that is neither. Water scarcity is tightening. Temperature extremes are intensifying. And we can no longer manage systems without accounting for these realities.

The Sustainable Water Impact Fund (SWIF) was designed to close that gap. SWIF is a collaboration between The Nature Conservancy (TNC) and RRG Capital Management (RRG), a global real assets manager with over 20 years of experience in land, water, and agri-food investing.

**SWIF is a 10-year closed-end real assets fund that invests in agricultural land and water** across Mediterranean climate regions in California, Latin America, and Australia—areas that are both desirable for farming and home to an outsized concentration of biodiversity hotspots. The crops that grow in these climates, crops adapted to dry summers and winter rainfall, are among the most exposed to climate-driven agricultural disruption and among the most valuable in global premium food production. The fund brings institutional investors together around a diversified strategy: identifying high-value agricultural real assets that are or will be underutilized and/or unsustainable, and financing their transition toward more resilient, water-secure, and climate-adaptive operations. Value generation is typically driven by improved siting, usage, and management of land and water—and often a corresponding diversification of revenue sources.

One structural feature that distinguishes SWIF from conventional funds is the depth of its impact governance. The Nature Conservancy is embedded directly into the fund's structure,

advising on environmental and community topics on both the Technical Advisory Committee (TAC) and the Investment Committee. The TAC, which includes TNC, RRG, and a third-party expert advisor, evaluates how investments meet the fund's environmental and social safeguards and advises the Investment Committee on opportunities to generate meaningful and measurable impact. TNC, as a member of the Investment Committee voting on those matters, is positioned to enforce and effectuate the TAC's guidance. Taken together, this is not a reporting mechanism applied after the fact—it is conservation expertise integrated into the investment process itself, providing science-based validation of impact and expanding the fund manager's access to technical and local knowledge that shapes every investment decision.

The range of impact mechanisms reflects the fund's ambition. Permanent land and water protections can be secured through conservation easements and conservation sales, shielding assets from future threats of conversion or degradation. Restoration and improved land management can create enhanced habitat for biodiversity—through replanting native trees and plants, establishing wildlife corridors, introducing pollinator-friendly native crops such as macadamia, and managing invasive species. On-farm energy transitions and reduced fertilizer use can drive climate mitigation outcomes. And land-based interventions that reduce sedimentation and runoff, combined with legal dedications of water to nature, can produce freshwater benefits that extend well beyond property boundaries.

One investment in Chile illustrates the model at work. On a farm purchased by the fund, 1,730 acres of water-intensive rice had been grown for years. SWIF financed the transition to lower water-use hazelnuts while shifting part of the farm's water supply from seasonally variable surface water to reliable groundwater drawn from a healthy aquifer. Furthermore, the farm was sited in a location expected to be climatically suitable for the crop types under various climate scenarios, and the new plan for the farm included habitat restoration and wildlife corridors that created connectivity for wildlife to migrate between native habitat scattered across a working landscape. It is a strategy for a more productive, more resilient, and ecologically less burdensome operation – one producing a high-value, high-demand agricultural product in hazelnuts, while reducing pressure on a shared water system.

SWIF's broader ambition is catalytic: to demonstrate to other asset managers and producers that nature-based solutions and sustainable farm operations are not niche strategies but competitive ones. As climate and water conditions continue to shift, the fund aims to demonstrate that agricultural assets best positioned to maintain long-term value are those managed in alignment with the natural systems that sustain them. SWIF is designed to demonstrate a model for deploying private capital to help transform a food system under pressure into one built to thrive.





## CASE STUDY 2 DROUGHT RESILIENCE

# The Cape Town Water Performance-Based Bond: Financing Nature as Infrastructure

When Cape Town came within days of running out of water in 2018, the crisis crystallized what scientists and conservationists had been warning about for years: the city's water security depended not only on pipes and reservoirs but on the health of the mountain catchments that fed them. The "Day Zero" drought was a wake-up call that grey infrastructure alone—desalination plants, groundwater extraction, expanded reservoirs—could never fully solve. The ecosystems that captured and stored rainfall were degraded, and no amount of engineered infrastructure could substitute for what healthy catchments provide for free.

The numbers tell the story starkly. More than two-thirds of the 25 sub-catchments supplying the Western Cape Water Supply System are invaded by alien plants that consume water at rates far exceeding the native fynbos they have displaced. These invasions reduce water availability by an estimated 55 billion liters per year—a loss projected to double within 30 years if left unmanaged. They also increase wildfire risk, threaten the globally significant Cape Floristic Region, and drive up the long-term costs of water treatment and supply. Meanwhile, the region's population is growing rapidly, and water demand outstrips supply, requiring an additional 300 to 350 million liters per day by 2028. The cost of addressing that gap through grey infrastructure alone could exceed R8 billion in public investment.

The Greater Cape Town Water Fund (GCTWF) was established in 2018 to demonstrate that investment in ecological infrastructure—restoring healthy catchments by removing invasive alien plants—could deliver water security outcomes at a fraction of the cost of conventional alternatives. Downstream water users, including government agencies, municipalities, corporations, and financial institutions, co-invested in upstream restoration, creating a shared funding pool aligned around a common interest: reliable, affordable water. Catchment



restoration through the Water Fund delivers water at an average cost of roughly R1.2 per cubic meter—approximately one-tenth the cost of desalination or water reuse. The economic case was clear. What was needed next was a financial mechanism capable of mobilizing that case at the scale the crisis demanded.

That mechanism arrived in 2026 with **the launch of Africa's first nature-linked, outcomes-based bond issued by a commercial bank. The Cape Water Performance-Based Bond was designed by Rand Merchant Bank (RMB) and issued by First Rand Bank (FRB) to move conservation finance from short-term grants toward long-term, performance-based investment—treating nature not as a charitable cause but as investable infrastructure.**

A portion of investor returns is directly linked to independently verified ecological outcomes: hectares cleared of invasive alien plants and increased streamflow to the dams. The Nature Conservancy in South Africa serves as the implementing partner, with independent technical verification provided by Conservation Alpha. Outcomes-based funders and philanthropic capital de-risk the transaction, enabling private investment at a scale that grant funding alone could never reach.

The target is ambitious. Restoring seven priority sub-catchments covering 54,300 hectares is projected to deliver 55 billion liters of additional water annually within six years—growing to approximately 100 billion liters per year within 30 years as restored catchments continue to recover. The program involves labor-intensive invasive plant control methods, creating over 1,500 job opportunities in the first six years. The GCTWF offers technical training and development of specialized high angle rope skills for small businesses. Improved catchment hydrology reduces sedimentation into reservoirs, protects groundwater recharge, and lowers wildfire severity—benefits that compound over time and extend well beyond the water sector.

The bond's significance reaches beyond Cape Town. It is designed as the first in a replicable series, providing a blueprint for financing restoration across South Africa's Strategic Water Source Areas and, ultimately, globally. The model demonstrates that rigorous science, independent verification, and multi-sector partnership can together create the conditions for private capital to flow toward nature at scale. For governments, corporations, philanthropies, and institutional investors seeking to close the global water and nature funding gap, it offers an entry point: performance-based funding that delivers measurable climate resilience, water security, biodiversity protection, and jobs.



### CASE STUDY 3 DROUGHT RESILIENCE

## DRIF: Building a Global Investment Facility for Drought Resilience

Drought is one of the most far-reaching and underfinanced climate threats on Earth. Approximately 1.8 billion people are affected by drought globally, and the economic toll exceeds U.S.\$300 billion every year. Driven by the combined forces of climate change and unsustainable land use, droughts are becoming more frequent, more severe, and more unpredictable—eroding agricultural productivity, destabilizing water systems, threatening ecosystems, and pushing vulnerable communities deeper into poverty. Yet despite the scale of the challenge, the financing response remains overwhelmingly reactive. The vast majority of drought-related funding flows toward post-disaster relief rather than prevention. The result is a cycle in which communities are repeatedly devastated by crises that could have been mitigated, and the opportunity to build lasting resilience is lost.

Closing this gap will require a fundamental shift in how drought is financed—from reactive to proactive, from fragmented to systemic, and from primarily public to genuinely blended. Estimates suggest that U.S.\$2.6 trillion will be needed by 2030 to restore degraded land and strengthen drought resilience globally. Public funding and humanitarian aid alone cannot fill that gap. What is needed is a mechanism capable of mobilizing private capital at scale, demonstrating that drought resilience is not only a moral imperative but a sound investment.

The Drought Resilience Investment Facility—DRIF—is being developed to do exactly that. Spearheaded by the Global Mechanism of the United Nations Convention to Combat Desertification and the Government of Luxembourg, **DRIF is being structured as a U.S.\$300 to \$400 million blended finance vehicle that combines public and concessional funding with private institutional investment.** Its focus is on scalable drought resilience solutions in upper and lower middle-income countries, investing across three interconnected sectors: water infrastructure, sustainable agriculture, and nature-based solutions—each with a strong



empirical correlation to drought risk reduction. By concentrating capital in these areas, DRIF is designed to demonstrate, concretely and at meaningful scale, that drought resilience investments can generate both impact and risk-adjusted returns.

The structure is purpose-built to attract private capital that would not otherwise reach this space. Blended finance architecture—in which public and concessional funding absorbs first-loss risk and provides downside protection—significantly reduces the perceived risk for institutional investors, impact investors, and development finance institutions. A dedicated Technical Assistance Facility complements the investment vehicle, supporting project preparation and development, improving the bankability of pipeline opportunities, and providing post-investment support that strengthens the performance and replicability of funded solutions. This facility addresses one of the most persistent barriers to drought resilience investment: the absence of a robust, investment-ready pipeline of projects that private capital can confidently enter.

DRIF is designed to be the first of its kind—the first blended finance facility investing exclusively in drought resilience-related themes—and that distinction is the point. Proving this model at the U.S.\$300 to \$400 million level creates a replicable template for future fund launches in other geographies, establishing drought resilience as a recognized and credible asset class within the broader climate finance landscape.

Expected outcomes span environmental, social, and financial dimensions. On the environmental side, DRIF investments are anticipated to improve water availability and efficiency, reduce land degradation, enhance biodiversity, and strengthen ecosystem resilience across drought-affected landscapes. Socially, the facility will support agricultural livelihoods, improve food security, and reduce the vulnerability of smallholder farmers and rural communities—with a gender lens embedded in investment criteria to promote inclusive and equitable outcomes. Financially, the facility's impact will be tracked through a dedicated measurement system monitoring performance indicators aligned with drought resilience, sustainable development goals, and climate outcomes.

Scaling DRIF requires initial concessional funding, engagement from development finance institutions to anchor the vehicle's blended structure, and participation from private investors ready to enter this emerging market. For those investors, donors, and development partners seeking to move drought finance from relief to resilience, DRIF offers both the structure and the opportunity to prove it can be done.



#### **CASE STUDY 4 DROUGHT RESILIENCE**

## **Transboundary Water Resilience in the Drin River Basin**

The Drin River Basin stretches across five riparian economies—Albania, Kosovo, Montenegro, North Macedonia, and Greece—binding together more than 1.6 million people through a shared hydrology that neither borders nor political boundaries can contain. Its rivers, lakes, and wetlands support hydropower generation, agriculture, biodiversity, and other ecosystem services, while also linking communities and landscapes that have depended on these waters for millennia. When the basin's water systems come under stress, the effects ripple across every jurisdiction—and no single country can address them alone.

The pressures bearing down on the Drin Basin are intensifying from multiple directions. Urbanization, deforestation, unsustainable agricultural practices, and tourism development are pressures to water quality and undermine the ecological systems. Climate change is amplifying these pressures: river flow variability is increasing, summer precipitation in some areas of the basin is projected to decrease by 40 percent or more by 2050, and the cycle of flooding and hydrological drought is tightening. Nutrient pollution, agricultural runoff, and biodiversity degradation—particularly in aquatic ecosystems—have been identified as key transboundary pressures that no riparian country can resolve independently. The basin's interconnected hydrology ensures that upstream decisions shape downstream realities, for better or worse.

For most of the basin's history, flood and drought risk management has been reactive and unilateral—each country responding to crises within its own borders without the coordinated planning that the basin's shared hydrology demands. Fragmented governance has been both a cause and a consequence of underinvestment: without shared priorities, financing cannot flow efficiently; without financing, the evidence base and institutional capacity needed for shared priorities cannot develop. The result is a basin that is more vulnerable than its ecological potential would suggest.

The Drin Basin Coordinated Action framework—known as Drin CORDA—was designed to break that cycle by establishing the governance architecture and financing mechanisms that transboundary resilience requires. At its core is a transboundary institutional arrangement established through the Drin Memorandum of Understanding (2011). **Drin CORDA has established a formal governance mechanism that aligns policy, planning, and financing efforts across all five riparian economies around jointly agreed priorities.** This framework ensures that upstream interventions deliver measurable downstream benefits, and that financing is directed toward problems the basin shares rather than toward national interests that may diverge. By establishing a shared evidence base—including a basinwide baseline for water quality, biodiversity, ecosystem services, and hydrological conditions—the initiative has created the common understanding that makes coordinated investment possible. This framework has been supported by blended, programmatic financing by the Global Environment Facility and implemented through partnerships facilitated by the Global Water Partnership and the United Nations Development Programme. **Core GEF funding has been combined with investment from the Adaptation Fund for flood risk management, alongside national government contributions and in-kind support, creating a pooled financing structure that supports basin-wide interventions.** Investments have targeted transboundary coordination, science-based joint fact finding, sustainable land management, wastewater treatment improvements, and ecosystem restoration—each addressing a documented source of transboundary pressure.

Results are already visible across environmental and institutional dimensions. Major pollution sources and environmental hotspots have been mapped and prioritized. Institutional capacity for integrated water resources management has strengthened significantly among riparian authorities. Stakeholder engagement has deepened at national, sub-basin, and local levels. And critically, the model has demonstrated how relatively modest catalytic grant funding can unlock larger public investments and create enabling conditions for future private sector engagement—a proof of concept with direct implications for scaling.

The next phase of the initiative—anchored on an approved transboundary Strategic Action Programme—aims to translate this governance foundation into Drin-wide basin management planning, joint monitoring programmes, exchange of data, larger-scale investment, deepening investments in nature-based solutions, expanding climate adaptation financing, and attracting private sector participation in agriculture and tourism value chains that depend on a healthy basin. The model is replicable wherever fragmented governance limits financing across shared water systems, and its strength lies in a simple but powerful insight: shared risk, addressed through shared financing, produces outcomes that no single actor can achieve alone.





SECTION 2

# RANGELANDS & GRASSLANDS



## CASE STUDY 1 RANGELANDS & GRASSLANDS

# Eternal Mongolia: Project Finance for Permanence

Mongolia's grasslands are among the last great intact temperate grasslands on Earth—a sweeping, open landscape spanning more than 130 million hectares that has sustained nomadic herding communities for millennia, sequestered millions of tons of carbon annually, and harbored remarkable wildlife. Yet today, 70 percent of those grasslands are affected by degradation. Overgrazing, land conversion, and the accelerating pace of climate change have fractured an ecosystem that once seemed boundless. More frequent and severe dzuds—extreme winter weather disasters that periodically devastate livestock herds—are compounding the crisis. For the one third of Mongolia's population that depends on grasslands for its livelihood, the stakes could not be higher.

Traditional conservation grants and short-term programs have proven inadequate to the scale of the challenge. What Mongolia needed was not another project—it needed a durable long-term strategy. In April 2024, the Government of Mongolia, The Nature Conservancy and the Mongolian Nature's Legacy Foundation took that step together, signing the Eternal Mongolia agreement: a Project Finance for Permanence (PFP) initiative that commits US.\$198 million to conservation over 15 years as a part of a strategy to establish a sustainable conservation system.

**Project Finance for Permanence is a proven model for closing the gap between what conservation currently receives and what it actually requires. Rather than funding individual protected areas or time-limited interventions, PFPs bring all relevant stakeholders—government agencies, Indigenous and local communities, NGOs, and funders—to the table under a single closing agreement. Every commitment is made up front, financing is secured for the long term, and independent conservation trust fund management ensures accountability. The result is durable conservation at a scale that no single donor or project could achieve alone.**

Eternal Mongolia's vision is sweeping in its ambition. The agreement will safeguard an additional 14 million hectares of pristine grasslands, forests, deserts, wetlands, and rivers— protecting ecosystems that have already demonstrated their ecological and cultural irreplaceability. It will enhance the management of 48 million hectares of national protected areas and promote climate-resilient land use practices across 34 million hectares of community-managed land. Together, these commitments represent a fundamental shift in how Mongolia finances and governs its natural heritage.

Implementation has progressed rapidly since the agreement was signed. The Mongolian Nature's Legacy Foundation—the independent conservation trust established to implement the PFP— is now fully operational, with core policies in place, an active board overseeing a growing grant portfolio, and its first grants already disbursed. In just its first year, the Foundation, in partnership with the Ministry of Environment and Climate Change, conducted a comprehensive assessment of 15.3 million hectares of local protected areas to evaluate their potential for upgraded status; 17 areas covering 2.4 million hectares have already received local government endorsement for enhanced protection. The Protected Area Accelerator Program provided funding, technical assistance and capacity building to support Protected Area administrations. A comprehensive review of all 41 protected area administrations also produced Mongolia's first national integrated protected areas database —establishing the baseline framework and shared standards that will guide how Mongolia manages and monitors its conservation estate for generations.

A Memorandum of Understanding with the Ministry of Finance has also embedded results-based budgeting into the national public finance system, directly linking government budget allocations to measurable conservation outcomes. This integration signals a transformation: conservation is no longer a line item to be negotiated annually but a national priority with dedicated, accountable financial architecture.

The PFP model at the heart of Eternal Mongolia is championed by Enduring Earth, an ambitious global collaboration led by The Nature Conservancy, The Pew Charitable Trusts, World Wildlife Fund, and ZOMA LAB. Since its launch in December 2020, Enduring Earth has worked with local leaders from governments, Indigenous peoples, communities, partners, and funders across eight PFP initiatives in Brazil, Canada, Colombia, Mexico, Mongolia, and Namibia. These efforts have already secured the durable conservation of 231 million hectares of lands and waters, strengthening livelihoods through inclusive stewardship and sustainable economic development, with 10 additional projects currently in development. The model has proven replicable precisely because it works from the inside out — aligning the financial and policy structures of sovereign governments with the long-term needs of the landscapes and communities they steward.

For nations facing a similar gap between aspiration and action, Eternal Mongolia, and the PFP model championed by Enduring Earth, offers a compelling blueprint: long-term commitment, aligned stakeholders, and financing that matches the scale of the challenge.





## CASE STUDY 2 RANGELANDS & GRASSLANDS

# Restoring Rangelands in Northern Kenya and Northern Tanzania

The rangelands that arc across the Kenya-Tanzania borderlands are not empty spaces between destinations. They are living systems — vast, intricate, and profoundly inhabited. These open grasslands and savannas support the livestock-based livelihoods of thousands of pastoralist communities while providing habitat and migration corridors for iconic wildlife—Grevy's zebra, elephant, lion, black rhino, and vast flocks of migratory birds. The health of these rangelands is not merely a conservation concern: it is the foundation of the region's economy and a source of cultural identity for the communities who have stewarded it for generations.

The ecological integrity of these landscapes and their capacity to sustain wildlife, sequester carbon, and buffer communities against drought, is under serious pressure. Up to half of these rangelands are highly degraded due to historical overgrazing, invasive species, land fragmentation, and the mounting effects of climate variability. Without intervention, declining grass productivity will intensify. And while these rangelands can recover with well-managed grazing and land governance, the finance needed to sustain conservation efforts has never matched the scale of the challenge.

TNC and partners set out to change that by treating these landscapes not as conservation objects to be protected from the outside, but as community-managed assets capable of generating durable returns. The model is built on a simple but powerful logic: communities earn long-term income by improving how shared rangelands are grazed, and the verified climate benefits of that improved management are sold as carbon credits. In Kenya, 22 community conservancies spanning approximately 1.9 million hectares under the Northern Kenya Rangelands Carbon Project now use coordinated grazing plans, protected recovery areas, and systematic land-health monitoring to guide day-to-day management decisions. In

Tanzania's Tarangire ecosystem, villages and grazing committees are building comparable plans and institutional capacity under a model that links land tenure security to long-term carbon finance.

What makes this approach innovative is how it sequences its financing. **Early-stage public and grant funding—from USAID, the UK Darwin Initiative, and private philanthropy—covers the preparatory work that reduces risk for all parties:** land-use planning, tenure formalization, community training, and project setup. This catalytic investment creates the conditions for a community-led enterprise to operate sustainably on its own terms. **Once grazing management improves, soil and vegetation health can be monitored and independently verified, credits are issued and sold, and revenue flows back to communities** under governance structures they have designed and own.

The Kenya project has already issued more than 3.2 million verified carbon credits, creating a meaningful performance-based revenue stream that communities are directing toward local priorities. In Tanzania, over 1.2 million hectares of communal rangeland now have strengthened land tenure rights, and more than 850,000 hectares are actively practicing sustainable grazing. Of that, 830,000 hectares under sustainable grazing management are linked to soil carbon finance under development through the Enjipai Community Carbon Project, which will be a fully community-owned and operated nature-based enterprise. Field observations across both landscapes document improved vegetation cover and greater resilience to drought—tangible signs of recovery that are consistent with the ecological science.

More than 450,000 people are already benefiting from the program through strengthened land rights, improved grazing security, and emerging carbon revenue. Secure tenure, strong community leadership, patient capital, and credible monitoring systems have proven to be the key success factors. Where timelines for land formalization or carbon verification have extended, phased implementation and blended financing have kept momentum alive. Importantly, the project also provides powerful incentives for reestablishing historical and traditional practices of communal rangeland management which have been interrupted by contemporary challenges such as land fragmentation.

The current expansion plan under the Kenya-Tanzania Rangeland (KTR) program will scale this approach across a connected arc of landscapes—southeast through Kilimanjaro National Park to Lake Natron, west toward the Mara ecosystem, and north into Southern Kenya—strengthening ecological connectivity and pastoral resilience along transboundary corridors. The model is highly replicable wherever communal tenure, sustainable grazing systems like rotational grazing, and ecosystem service markets can be aligned. Scaling it requires catalytic capital to bridge communities through to carbon revenues, long-term buyers for high-integrity soil carbon credits, and governments and partners committed to community-led natural solutions at landscape scale.



### CASE STUDY 3 RANGELANDS & GRASSLANDS

## STELARR: Unlocking Private Investment for Rangeland Restoration

Rangelands cover roughly half of the Earth's land surface. They support the livelihoods of approximately two billion people, including 500 million pastoralists; provide critical habitat for biodiversity; regulate watersheds that supply freshwater to vast human populations; and sequester carbon at a scale that makes them indispensable to any credible climate strategy. Yet, a significant proportion of the world's rangelands are actively degrading. Prolific spread of invasive and alien plant species, land-use conversion, climate change, and unsustainable grazing are eroding the ecological and economic foundations we depend on. Public funding alone cannot reverse this trajectory. The investment gap is simply too large—and the opportunity too significant—for conservation to succeed without private capital.

Every dollar invested in rangeland restoration can return between U.S.\$4 and U.S.\$35 in economic benefits. Healthy rangelands reduce climate risk, sustain food production, protect water supplies, and support the premium livestock value chains—cashmere, mohair, leather—that connect pastoral communities to global markets. The business case is compelling. What has been missing is the financial infrastructure to make that case legible to investors and to match capital with credible restoration opportunities at scale. STELARR—Sustainable Investments for Large-Scale Rangeland Restoration—was built precisely to fill that gap.

Funded by the Global Environment Facility and implemented by IUCN in collaboration with the International Livestock Research Institute and other CGIAR centers, **STELARR operates as an investment hub: a platform that develops rangeland restoration investment cases, connects them with investors and financiers, and provides the supporting services—monitoring, reporting, impact verification—that give capital confidence in what it is funding.** The model moves deliberately beyond traditional grant-based conservation, recognizing that the scale of rangeland degradation demands commercial engagement, not charity.

**One of STELARR's most distinctive features is its focus on high-value livestock value chains as a channel for restoration finance.** By collaborating with premium brands and linking the production of luxury fibers and leather to the ecological health of the rangelands where they originate, STELARR creates a direct financial incentive for brands, producers, and investors to invest in restoration. Working with the Sustainable Fibre Alliance, the project is supporting the development of a Global Rangelands Standard through the Rangeland Stewardship Council—a framework that allows pastoralists to earn higher market prices for sustainably produced goods. Better rangeland management becomes not just the right thing to do, but the profitable thing to do.

To aid investment decisions at scale, STELARR is also building the Global Rangelands Data Platform—a digital gateway designed to consolidate rangeland data from across the world, enabling evidence-based decision-making and consistent impact monitoring across heterogeneous landscapes. This platform addresses one of the critical barriers to private investment: the absence of standardized, credible data that investors need to assess risk and measure returns. In-depth analyses of livestock value chains across Latin America, Africa, and Central Asia have already identified specific restoration opportunities aligned with commercial markets and investment readiness.

Throughout, STELARR maintains an explicit commitment to equity. The project prioritizes measurable livelihood benefits for local pastoralists, with specific focus on empowering women and youth within the livestock value chain—recognizing that large-scale restoration is neither sustainable nor just unless the communities who manage these landscapes benefit directly and durably.

Early results are encouraging. STELARR has already influenced a private-sector investment in Mongolia, demonstrating proof of concept for the hub model. The portfolio of investment cases continues to expand globally, matched with a growing pool of ready investors. By 2030, STELARR anticipates facilitating investment in more than five million hectares of restored rangelands—a milestone that would represent a meaningful turning point in the trajectory of one of the world's most undervalued ecosystems. For investors and partners seeking to deploy capital in rangeland restoration, the infrastructure is being built. The opportunity is ready to scale.



#### CASE STUDY 4 RANGELANDS & GRASSLANDS

## Regenerating the Patagonian Steppe: The ESTEPPA Carbon Project

As one of the world's largest rangeland ecosystems, the Patagonian steppe extends across more than 70 million hectares of southern Argentina and Chile. Its vast open plains provide habitat for iconic wildlife, including guanacos, pumas, rheas, and condors, while its soils store significant amounts of carbon. This globally important landscape supports both biodiversity and rural livelihoods.

For more than a century, ranching families have lived and worked across the steppe, producing world-renowned wool and livestock in one of the planet's most challenging pastoral environments. Many producers have developed a deep understanding of the land and its ecological dynamics. Yet decades of overgrazing, climate variability, economic pressures, and limited investment have contributed to widespread land degradation. Today, an estimated 70 percent of the Patagonian steppe is affected by some degree of desertification, reducing forage productivity, diminishing water retention, and threatening the long-term viability of ranching communities. The ESTEPPA Carbon Project was developed to help reverse this trajectory.

Producers understand the challenge. What they often lack is access to financing, technical assistance, and market incentives that align with the realities of ecological restoration. Regenerative grazing transitions require investments whose benefits may take years to materialize through improved pasture condition, healthier soils, and increased ecosystem resilience. High upfront costs, limited access to tailored financing, and insufficient technical support have made these transitions difficult to undertake at scale. ESTEPPA was designed to address those barriers.

Developed by TNC as an integrated landscape program for Patagonia, ESTEPPA—Estrategias para la Producción y el Pastoreo en la Estepa Patagónica (Strategies for Production and Grazing in the Patagonian Steppe)—is built around three complementary pillars: the adoption

of regenerative grazing practices; the development of differentiated market access linking sustainable production to high-value value chains for meat, fiber, and carbon; and the strengthening of local capacities, governance, and long-term stewardship. At the heart of the program's financial model is the ESTEPPA Carbon Project—a voluntary carbon market mechanism that rewards producers for verified increases in soil organic carbon resulting from regenerative grazing practices.

The financial architecture reflects careful co-design with producers. Rather than imposing external frameworks, the program developed benefit-sharing and governance structures in direct collaboration with ranching families—a process that has generated trust, strong adoption, and signed Expressions of Interest from participating producers. The project is being developed under Verra's VCS framework and is intended to pursue CCB certification, ensuring environmental integrity and credibility in voluntary carbon markets. TNC's Global Benefit Distribution Framework provides revenue stability through fixed payments ahead of credit issuance, addressing one of the most significant deterrents to producer participation: the long lag between practice change and financial return.

**The Natural Climate Solutions Accelerator provided early-stage catalytic funding that enabled the project to reach maturation. A dedicated business incubator is now structuring a Special Purpose Vehicle to channel investment and scale producer participation, creating a formal financial mechanism capable of attracting commercial capital.** The SPV model allows the program to leverage early philanthropic and catalytic funding to crowd in private investment as proof of concept is validated. Producers receive an integrated support package: technical assistance, upfront investment, and multiple revenue streams spanning carbon credits and improved livestock market positioning.

To ensure effective delivery of technical support at scale, TNC has established the Technical Support Platform for Patagonia (PAT-PAT)—a multi-stakeholder technical support platform that brings together universities, provincial governments, NGOs, technical advisors, and agricultural extension institutes such as INTA. In its first phase, the platform has been consolidated to cover Northern Patagonia, uniting efforts and resources to advance grassland regeneration across the region.

The program is organized around five territorial work clusters, conceived as operational nuclei from which implementation will progressively expand: Cluster 1, western Neuquén and Río Negro; Cluster 2, Magallanes region in Chile; Cluster 3, monte region of Río Negro; Cluster 4, western Chubut; and Cluster 5, southwestern Santa Cruz. This cluster-based architecture allows the program to adapt to local ecological and institutional conditions while maintaining a unified framework for monitoring, learning, and scaling. The overarching goal is ambitious: to advance regenerative management across 10 million hectares of Patagonian rangelands by 2030.

Phase I of the ESTEPPA Carbon Project will bring the first 200,000 hectares under regenerative transition, with validation targeted for 2027 and initial credit issuance anticipated in 2030. Subsequent phases are expected to expand implementation across an additional 1.2 to 2 million hectares, contributing to the program's long-term target of 10 million hectares of rangeland restoration. Across this scale, the program will deliver measurable increases in soil organic carbon, restore degraded grasslands and wetlands, enhance biodiversity and wildlife coexistence, and improve the stability and resilience of incomes for ranching families who have long been left without viable alternatives to degradation.

The programmatic structure is designed for replication. The same integration of regenerative grazing, market linkages, and community engagement can be adapted to other grassland and rangeland ecosystems where livestock systems dominate and financing gaps persist—from the Orinoquia in Colombia to the Gran Chaco in Argentina to temperate grasslands in North America and Mongolia. Scaling ESTEPPA requires investment in early implementation and SPV capitalization, expansion of producer onboarding and technical assistance, and the deployment of locally embedded technical staff capable of working across a vast and varied geography. For investors and development partners, ESTEPPA offers something rare: a model that has been co-designed with producers, grounded in robust standards, and structured to attract the scale of capital the Patagonian steppe urgently needs.



SECTION 3

# LAND RESTORATION & SOIL HEALTH



## CASE STUDY 1 LAND RESTORATION & SOIL HEALTH

# Green Credit Unions for Grassland Restoration in Mongolia

For generations, Mongolian herding families have sustained themselves by tending their livestock across some of the world's most expansive and ecologically intact temperate grasslands. That way of life is now under profound threat: Mongolia's grasslands have degraded 60–70% compared to their reference state. Most of the loss is attributed to worsening livestock management and overstocking, growing droughts, and climate-induced weather shocks. The 2024 dzud, one of the most severe extreme winter weather events in recent memory, killed roughly 12.5 percent of Mongolia's national livestock herd in a matter of weeks, exposing just how precariously exposed herding households have become.

The root of the problem is financial as much as ecological. Overgrazing is driven by a host of factors such as government subsidies, poverty, climate change, an absence of viable financial alternatives, and economic market failures. In Mongolian herder communities, livestock functions as the primary instrument for revenue generation as well as savings and wealth accumulation. The more livestock a family owns, the wealthier it is—but also the more pressure it exerts on already overstrained pastures. As pastures become overstrained, livestock health and productivity declines, in turn pushing down incomes such that herder households cannot break the cycle of overgrazing that is gravely straining one of the planet's last intact grassland ecosystems. Meanwhile, social insurance reaches just 16 percent of herders; index-based livestock insurance covers only 10 to 20 percent of households and is growing costlier; and the 60 percent of herding families who borrow from banks typically pay above Mongolia's already-high 16 percent average lending rate, with heavy collateral requirements.

TNC recognized that addressing grassland degradation at scale required a financial solution rooted in how herding communities actually manage their income generation and wealth. In

2023, TNC launched a pilot with community-based organizations to form Village Savings and Loan Associations—VSLAs—designed specifically for conservation. **These community-managed savings groups pool members' resources to provide small loans and grants for conservation-aligned investments. The loans directly fund healthy grassland management while simultaneously helping community members diversify their income and financial management activities, allowing them to maintain more sustainable livestock numbers.**

The results have exceeded expectations. By mid-2025, with TNC's support, 104 community-based organizations and approximately 2,000 households across 2.4 million hectares of communal grasslands had established conservation-focused VSLAs—nearly double the original targets, thanks to strong community feedback and interest. VSLA communities have showed governance quality measures 36 to 68 percent higher than non-VSLA counterparts, natural resource management plan development and implementation 55 percent higher, and incidence of natural resource management financing 70 percent higher. Household savings behavior has shifted measurably: 70.5 percent of VSLA community households now save through VSLA or credit union revolving funds, compared to a baseline of just 0.8 percent in 2023.

To build on these gains, TNC is helping VSLAs graduate to a more powerful institutional form: government-insured green credit unions. Working with the Mongolian Confederation of Credit Unions (MOCCU) and the nation's Financial Regulatory Commission (FRC), TNC has launched three new green credit unions and partnered with five pre-existing credit unions to embed conservation into their operations. All eight have committed at least five percent of net annual revenues to natural resource management and have piloted five green financial products, including an "Animal to Cash" program, which incentivizes herders to convert livestock wealth into interest-bearing savings accounts bundled with green loans for livelihood diversification. In pilot areas, the Animal to Cash program reduced pastureland overload by 10 percent. Some communities have reduced their livestock numbers by as much as 30 percent while maintaining stable incomes.

When grassland finance reaches the people who manage it most sustainably, the ecological and social returns compound. Women are largely leading this transformation. They comprise more than 70 percent of VSLA fund managers, 74 percent of governance committee members, and 100 percent of new credit union executives.

Now, in collaboration with MOCCU, FRC, and the Mongolian Nature's Legacy Foundation (MNLFF, the conservation trust fund established through the historic Eternal Mongolia Project Finance for Permanence), TNC is working to graduate all remaining conservation VSLAs into licensed green credit unions and to scale these strategies across the country. An additional 60 community-based organizations across five soums and 795,000 hectares have already committed to join. The model is already being adapted for peatlands, freshwater systems, and similar programs in Peru, Tanzania, Papua New Guinea, the Solomon Islands, and Indonesia. Donors and investors can help by providing grant capital to support new green credit union establishment and complementary technical assistance; co-investing in a planned blended finance facility to scale up provision of nature-positive financial products; and sharing experience from relevant work globally.



## CASE STUDY 2 LAND RESTORATION & SOIL HEALTH

# Redirecting Agricultural Finance in the Amazon, Cerrado, and Chaco

Somewhere between a farmer's field and a global commodity market, deforestation happens. Not because farmers are indifferent to the forests around them, or because companies are indifferent to the risks that deforestation creates. It happens, in large part, because the financial system has not been structured to reward any other outcome. Agricultural credit flows toward expansion. Market prices rarely reflect the ecological cost of conversion. And the producers, often smallholders or mid-sized operations with limited resources, are left with no other option but to clear land.

As the leading cause of deforestation worldwide, agriculture threatens 86 percent of the world's species at risk of extinction and is responsible for a significant share of global greenhouse gas emissions. In Latin America, the scale of the crisis is particularly acute: rapidly expanding soy production and cattle ranching across Brazil, Argentina, and Paraguay are converting some of the planet's most biodiverse ecosystems—the Amazon, the Cerrado, and the Gran Chaco—at a pace that outstrips the conservation tools available to slow it. As long as economic incentives reward agricultural expansion rather than sustainable productivity, this trajectory of destruction will continue.

Innovative Finance for the Amazon, Cerrado and Chaco—IFACC—was created to change those incentives. Launched by TNC, the Tropical Forest Alliance, and the United Nations Environment Program in 2021, **IFACC brings together companies, banks, and investors to advance lending and investment models that help agriculture businesses across these three regions transition away from destructive practices. With 26 signatories, IFACC is working to mobilize U.S.\$10 billion in commitments and disbursements by 2030, with the ultimate goal of unlocking the U.S.\$30 billion in capital needed to ensure that beef, soy, and other agricultural commodities produced in these regions meet deforestation-free standards.**

The mechanism at IFACC's core is straightforward: rather than treating deforestation-free production as a compliance burden, IFACC structures financial products that make it economically competitive. Since its launch in 2021, IFACC has brought 20 financial products to market, including first-loss guarantees, technical assistance grants, and a plug-and-play blueprint for catalytic capital that mainstream lenders can adopt without building new systems from scratch. These products offer more favorable financial conditions than those typically available to producers, such as longer tenors, grace periods, and reduced interest rates. These mechanisms help ease the financial burden on farmers who are transitioning to sustainable production systems need time and capital to make the shift viable.

IFACC also facilitates connections to catalytic capital, provides advisory support on environmental and social impact management, and shares intelligence on product structures and market innovations. The initiative helps partners leverage deforestation-conversion-free aligned products to meet habitat protection goals in ways that generate returns and demonstrate that sustainability and profitability are mutually reinforcing objectives.

The impact to date is substantial. IFACC has disbursed nearly U.S.\$954 million through its financial tools and provided technical guidance to hundreds of mid-sized producers, helping safeguard rural livelihoods while enabling compliance with emerging trade regulations including the EU Deforestation Regulation. IFACC's support has helped implement sustainable management practices on 668,000 hectares, prevented the conversion of more than 183,000 hectares, and avoided the release of approximately 25 million metric tons of carbon dioxide.

The next phase of IFACC's growth will require a deeper mobilization of catalytic capital. A key priority for IFACC and its signatories is supporting the design and launch of vehicles that blend public, philanthropic, and commercial capital, targeted at deforestation-conversion-free production models. This means engaging governments, development finance institutions, and value chain actors to mobilize concessional resources, and bringing senior executives together across financial institutions, agribusinesses, and investors to drive collective action. The ambition is to demonstrate, conclusively, that the same mechanisms that have historically rewarded expansion can be restructured to reward restoration and responsible production at scale.



### CASE STUDY 3 LAND RESTORATION & SOIL HEALTH

## The Kenya Adaptation Finance Program: Finance for Regenerative Agriculture

Kenya's smallholder farmers are on the front lines of two converging crises. Land degradation—driven by soil depletion, inefficient water use, and decades of farming practices that have mined nutrients without replenishing them—is undermining the productivity of agricultural systems that millions of rural families depend on. At the same time, climate variability is intensifying, making rainfall less predictable, droughts more severe, and the livelihoods of rainfed farmers more fragile with each passing season. Sustainable land management, including soil restoration, improved water use, and diversified climate-resilient agriculture, is urgently needed. But for the smallholder farmers who need it most, accessing the finance and technical support required to adopt these practices remains a fundamental barrier.

Financial institutions typically view smallholder agriculture in Kenya as high risk. Without viable credit products, farmers cannot invest in the practices that would reduce that risk over time—a self-reinforcing cycle that keeps land degraded and communities vulnerable. The Adaptation Finance Program, or AFP, was designed to break that cycle.

TNC and partners have spent several years building the foundation for the AFP through the Central Highlands Ecoregion Foodscape initiative, working along the Ewaso Ng'iro River—a critical water source connecting highland farms to downstream grazing lands and wildlife conservancies in the Kenya-Tanzania rangelands. This landscape-scale program has strengthened water access and governance across interconnected ecosystems, creating the institutional relationships and evidence base on which the AFP now builds. AFP targets key value chains across multiple counties, with an ambition to benefit 1.2 million farmers, improve management of over half a million hectares, and reduce approximately three million tons of carbon dioxide equivalent emissions annually.

**The AFP mobilizes investment through four integrated components, each addressing a specific constraint in the current system.** First, a loan guarantee facility reduces risk for financial institutions, enabling them to expand lending to smallholder farmers and agricultural SMEs for investments in productive and resilience-building activities. Second, a digital platform facilitates farmer onboarding, credit scoring, and loan disbursement for input financing and agricultural services—expanding access to underserved farmers who lack the documentation or collateral that traditional lenders require. Third, a technical assistance facility supports the adoption of climate-smart and regenerative practices, including soil management, crop diversification, and water-use efficiency. It also supports the development of regenerative business models for farmer cooperatives and micro-enterprises, as well as digital tools that improve both traceability and financial support. And finally, a joint work planning process convenes county governments and County Climate Change Funds, development partners, and private sector participants to align investment, technical assistance, and extension services at the local level.

The expected environmental impact reflects the ambition of that integrated approach. Improved management practices across approximately 540,000 hectares will enhance water retention, restore soil fertility, and contribute to the protection and restoration of roughly 3,500 kilometers of river systems. Reduced land degradation will strengthen ecosystem function in a landscape where the health of highland farms, grazing lands, and freshwater systems are intimately connected.

For farmers, the program's impact is tangible and immediate. Expanded access to finance, inputs, and advisory services enables smallholders to increase productivity and stabilize incomes. By reducing exposure to climate shocks, the program strengthens food security and rural resilience—particularly for women and youth, who face the greatest structural barriers to financial inclusion.

The AFP offers a model that is directly transferable to other regions facing land degradation, water scarcity, and climate stress where smallholder agriculture plays a central role in food systems. Its approach—aligning public investment with private capital, embedding technical assistance within financial products, and coordinating across governance levels—creates a structured, scalable pathway for regenerative agriculture finance. Investors and development finance institutions are invited to capitalize the loan guarantee facility. Philanthropic partners can support the technical assistance facility, which is the critical ingredient for building farmer capacity, reducing systemic risk, and ensuring the adoption of practices that will restore this landscape for the long term.