



Agroecology in Dryland Mosaic Landscapes

Technical Policy Brief – IUCN 2025



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List of Acronyms

GBF-T2 — Kunming–Montreal Global Biodiversity Framework, Target 2

NDCs — Nationally Determined Contributions

LDN — Land Degradation Neutrality

UNCCD — United Nations Convention to Combat Desertification

CBD — Convention on Biological Diversity

UNFCCC — United Nations Framework Convention on Climate Change

NBSAPs — National Biodiversity Strategies and Action Plans

PRAIS — Performance Review and Assessment of Implementation System (UNCCD reporting)

FMNR — Farmer-Managed Natural Regeneration

MoU / MoUs — Memorandum / Memoranda of Understanding

Executive summary

Dryland/rangeland mosaics across Africa face drought, degraded cover, and blocked mobility—eroding food, fodder, and stability. Agroecology is a proven, people-centred way to stitch these mosaics into one functioning system: Farmer-Managed Natural Regeneration (FMNR) + soil-water works, adaptive grazing with mapped corridors/pacts, reseeding/fodder, and diversified agroforestry. Where access is recognised and finance runs 8–10 years, results are consistent: soil and vegetation recover, water and fodder stabilise, conflict drops, and local enterprise—especially for women and youth—grows. This brief sets out what governments and funders must do now: secure mobility & tenure, finance locally-led bundles at duration, de-risk markets, and report once to GBF-T2, NDCs and LDN.

*“Give us **time and access**, and we’ll restore the land ourselves.” — Pastoralist leader, Sahel*

This brief targets decision-makers and funders and has a focus on policy and donor actions that can be adopted to scale agroecology. A separate technical paper has been developed for methods, visuals, and tools.

Key messages

- **Design for mosaics, not plots:** plan cropland–rangeland–woodland–water–corridors as one system; fund interfaces and flows.
- **Secure tenure & mobility:** recognise land and grazing rights, protect livestock routes and dry-season reserves, and renew simple local grazing pacts to keep herds moving.
- **Long-term, inclusive finance:** Commit 8–10-year funding with fast, direct windows also ensuring inclusion of women and youth.
- **Back proven bundles:** scale FMNR + soil-water harvesting + adaptive grazing; add reseeding/fodder and farm-edge agroforestry.
- **One evidence system:** a single community-owned narrative satisfies GBF-T2, NDCs and LDN—no parallel templates.

Call to action: Back dryland agroecology now—secure access, fund 8–10 years, scale FMNR + soil-water + adaptive grazing, and report once to GBF-T2/NDCs/LDN.

1. Introduction

Agroecology offers one of the most practical bridges between climate action, biodiversity recovery, land restoration and food security. Africa's drylands are mosaic landscapes—cropland, communal rangelands, woodlands and water points linked by livestock corridors. Drought, degradation and blocked mobility have weakened these connections, undermining food, fodder and stability. Agroecology stitches these mosaics into functioning systems: soil-and-water works with Farmer Managed Natural Regeneration (FMNR), adaptive grazing along recognised corridors, and diversified production at farm edges, co-designed with Indigenous and local knowledge. It also embodies a social contract—restoring dignity, equity and participation for communities who are both custodians and innovators of land stewardship.

For decision-makers and funders, the offer is clear: finance one locally led bundle and deliver outcomes that align with the Rio Conventions—GBF-T2 (ecosystem restoration through recovering cover and functioning corridors), NDCs (adaptation via reliable water and fodder, reduced conflict), and LDN (degraded land returning to stable/productive use). The evidence base for this brief draws on a bilingual stakeholder survey and mapping of 40+ agroecology-aligned dryland projects across the Sahel, Horn, East, Southern and North Africa. Across these cases, results are strongest where access and mobility are secured, and finance runs 8–10 years with direct, fast-pay windows to local groups.

This brief sets out exactly how governments and funders can engage to unlock scale: secure mobility and tenure through visible, legitimate rules; finance for 8–10 years with fast, direct payments to farmer, pastoralist, women and youth groups; back proven practice bundles rather than single fixes; de-risk markets from day one; and report once through a simple, community-owned evidence stream that serves GBF-T2, NDCs and LDN.

All quotes are anonymised to protect participants and enable candid, field-level testimony.

2. The policy opportunities (2025–2030)

By embedding agroecological principles in farming and rangeland management, countries **advance LDN, contribute to NDCs, and implement the GBF**—a unifying approach across the Rio Conventions.

The window is open. Countries are updating NDCs (2025), implementing GBF-aligned NBSAPs through 2030, and reporting LDN progress via UNCCD's PRAIS. Dryland agroecology turns these commitments into visible, reportable field change in one programme.

GBF-T2 (ecosystem restoration). Target 2 calls for large-scale restoration of degraded ecosystems by 2030. The agroecology bundle—FMNR + soil-water works + adaptive grazing with mapped corridors/pacts—restores canopy and ground cover, reconnects habitat, and stabilises water points, delivering measurable improvements in rangeland/cropland mosaics.

NDCs (adaptation with mitigation co-benefits). 2025 NDC submissions need concrete, locally led adaptation. Agroecology reduces drought risk and yield volatility (water retention, fodder reliability, dispute reduction) while adding mitigation co-benefits (tree/woody biomass, soil carbon).

LDN (UNCCD). National LDN targets track land cover, productivity and soil condition. Agroecology moves land from degraded to stable/productive states; the same community-owned “mosaic narrative” (cover up, structures functioning, pacts active, fodder reliable) can be reported once and reused in PRAIS.

IYRP 2026 (rangelands & pastoralists). Political attention is shifting to mobility, corridors and tenure. Agroecology operationalises these by turning corridor maps and grazing pacts into day-to-day rules and services (water, vet, mediation) that cut conflict and keep herds moving.

Finance can be aligned. Long-horizon envelopes (8–10 years), ≤72-hour micro-procurement for women/youth groups, and simple offtake MoUs translate public climate/LDN funds into delivery at village level—without creating parallel reporting.

“One programme, one logbook—and our reports cover climate, biodiversity and land.”
— National focal point, UNCCD/GBF alignment

3. What governments & funders can do

1. Access & mobility (addresses tenure/mobility barriers)
Why: Blocked corridors and contested reserves drive overuse and conflict; without movement, rangelands don't recover. Without clear routes and rules, rangelands are overused and conflict rises.
What to do: Legally recognise corridors and dry-season reserves, post simple grazing pacts, and finance basic route services (water, vet, mediation). Recognise mapped **corridors** and **reserves** in by-laws; post a **one-page pact** (who, when, how many, mediation, renewal); name a **mediation committee** with women & youth seats.
2. Time & inclusion in finance (fixes short-cycle funding)
Why: Short projects collapse maintenance; excluding women and youth slows diffusion and enterprise growth.
What to do: Commit 8–10-year envelopes and open fast micro-procurement windows ring-fenced for women/youth groups.
3. Back bundles, not single fixes (*mirrors top practices used*)
Why: Stand-alone works fail in isolation; recovery needs water + trees + managed grazing working together.
What to do: Fund FMNR plus soil–water harvesting first; add adaptive/mobility-based grazing, reseed/fodder banks, and farm-edge agroforestry as cover returns.
4. De-risk markets early (unlocks market access)
Why: Without buyers and cash flow, local seed/grass/seedling enterprises stall and adoption drops.
What to do: Sign minimum-offtake MoUs, enable public procurement of local agroecology inputs, and provide small revolving advances tied to MoUs.
5. One evidence system (reduces reporting burden)
Why: Parallel reporting could be overwhelming and fragments programmes.
What to do: Use a single, community-owned “mosaic” logbook and reuse it for GBF-T2, NDCs and LDN/PRAIS.
6. Co-design with Indigenous/traditional knowledge (uses local knowledge)
Why: Rules without legitimacy don't stick; pride and local practice leads to upkeep.
What to do: Co-set grazing calendars, pact clauses, species/seed choices and resting periods; run Training-of-Trainers for FMNR/pruning through local institutions.
7. Visible governance & mediation (clarifies rights, cuts disputes)
Why: Unclear rights fuel disputes and deter investment.
What to do: Insert corridor/reserve clauses into by-laws, post pacts publicly, and seat mediation committees with clear triggers and sanctions.
8. Learn while delivering (builds know-how, adapts fast)
Why: Adaptive management outperforms stand-alone studies in fast-changing drylands.
What to do: Build a few learning prompts into workplans, issue short seasonal notes, and adjust finance/rules from the findings.

“Corridors on the map turned arguments into rules we all understand.” — Rangeland committee member, northern Kenya

4. Financing — why it matters and how to make it work

Financing is the bottleneck—without long, direct, fast-pay funding, structures fail between seasons and adoption stalls. Dryland restoration fails when funding is short, fragmented, and stuck at intermediary level. Communities can't maintain soil–water works, keep FMNR going, or manage grazing without reliable cash flow and market access.

“When funding reaches the village, FMNR and water works stay alive between seasons.”
— Extension officer, Burkina Faso

What finance must do.

- Run long (8–10 years): Drylands recover over seasons, not quarters. Multi-year envelopes keep maintenance and behaviour change on track.
- Reach farmers directly: Simple local windows that pay fast enable nurseries, seed/grass producers, FMNR/pruning crews, and women/youth enterprises to deliver.
- Back the bundle: Fund FMNR + soil–water works + adaptive grazing together; add reseeded/fodder and farm-edge agroforestry as cover returns.

How this links to restoration, climate, biodiversity. One financed bundle produces the same field changes seen through three lenses:

- GBF-T2 (restoration): canopy and ground cover recover; corridors/reserves function.
- NDCs (adaptation): water and fodder reliability rise; disputes fall; livelihoods stabilise.
- LDN (UNCCD): degraded plots move to stable/productive states.
Finance one programme, report once with a single community-owned logbook.

Where the money comes from (and how to channel it).

- Align existing streams: GBF/NBSAP, NDC adaptation, LDN/UNCCD, domestic restoration budgets.
- De-risk early: light buyer MoUs and public procurement for seed/grass/seedlings unlock local enterprises.
- Pay fast: ensures continuous implementation of project activities and enhances active participation of women and youth.

What success looks like. Multi-year funds flowing to communities; fast, small payments proving delivery; buyers contracted; turns public climate and biodiversity finance into visible restoration on the ground.

5. Monitoring & alignment — “One logbook, three reports (GBF-T2 / NDCs / LDN)”

One story, three reports. Use a single, community-owned “mosaic health” logbook and reuse it to meet GBF-T2 (ecosystem restoration), NDCs (adaptation), and LDN/PRAIS (land degradation neutrality). No parallel templates.

Why this matters. It cuts reporting burden, keeps programmes coherent from field to policy, and centres dignity by letting communities define and verify progress.

What to track for impact

- Vegetation recovery: FMNR trees/woody cover maintained; grass cover returning on rested/reseeded blocks.
- Water & soil works: half-moons/bunds/sand-dams kept in working order.
- Mobility & access: corridors open; posted pacts current; disputes logged and resolved.
- Livelihood stability: fodder and key harvests more reliable; local agroecology enterprises active.
- Inclusion: meaningful participation and income share for women and youth; customary institutions engaged.

How it’s managed: Community committees keep the logbook; extension verifies; national focal points reuse the same dataset for GBF-T2/NDCs/LDN. Simple proof only (e.g., photos and locations); no extra forms.

“If it’s in the corridor book, everyone sees progress and problems.” — Youth committee representative, Laikipia

6. Case snapshots

Box 1 — Laikipia, Kenya: stitching the dryland mosaic

Challenge: Drought, invasive plants, degraded pasture, blocked corridors.

What was done: Community-led sand dams + half-moons; FMNR on farm edges; mapped corridors and posted grazing pacts; native grass reseeding; women/youth seed–grass and processing groups.

What changed: Dry-season water and fodder stabilised; disputes fell where pacts were posted; rested/reseeded blocks recovered faster; new local incomes from women/youth enterprises.

Policy levers proven: Recognise corridors/reserves in by-laws; fund bundles (water+trees, mobility, reseeding) on 8–10-year envelopes; run ≤72-hour micro-procurement windows; report once to GBF-T2/NDCs/LDN.

Scalability: Same bundle scalable where corridors are recognised and 8–10-year finance is in place.

*“What if the very plants degrading our rangelands could **feed our livestock, power our homes, and grow our businesses?**” — Cooperative leader, Laikipia*

Box 2 — Sahel drylands (Burkina Faso/Niger): water+trees first, then mobility

Challenge: Crusted soils, high runoff, feed gaps, tenure ambiguity.

What was done: Soil–water harvesting at scale (half-moons/bunds/zai); FMNR/ANR promoted through pruning ToT; resting blocks and seasonal corridors marked; fodder banks near settlements; early buyer MoUs for seed/grass.

What changed: Infiltration and ground cover increased; FMNR stems protected and pruned; dry-season feed more reliable; clearer access rules reduced friction; community enterprises met first offtake orders.

Policy levers proven: Finance water+FMNR in years 1–2; pair with corridor/reserve pacts; de-risk markets via simple MoUs; reuse a single community-owned evidence set for GBF-T2/NDCs/LDN.

Scalability: The “water + trees first, then mobility” sequence scales across Sahelian drylands wherever corridor pacts are recognised and multi-year finance maintains soil–water works and FMNR.

When half-moons held the rain and FMNR took hold, the corridor reopened—water and grass returned, and so did peace. — Pastoralist leader, Sahel

7. Conclusion

Dryland mosaics are under pressure from drought, degradation and blocked mobility. The evidence in this brief is clear: agroecology stitches these mosaics into functioning systems—water-and-trees first (FMNR + soil–water works), then mobility and resting with mapped corridors/pacts, plus reseeded, fodder banks and farm-edge agroforestry. Where access is recognised and finance runs 8–10 years, ecosystems recover, food and fodder stabilise, conflict drops, and women- and youth-led enterprises grow—while one community-owned evidence stream serves GBF-T2, NDCs and LDN.

Governments and funders now need to lock in access and mobility, fund for duration and inclusion, de-risk markets from day one, and co-design with Indigenous and local knowledge. Delivery stays simple and verifiable: posted pacts and corridors, functioning water-and-soil structures, FMNR pruning days, active reseeded blocks, fast micro-payments to local groups, and a single logbook reused across frameworks.

Set the first proof points within 12 months: ≥ 3 corridor segments and ≥ 2 reserves recognised and posted per landscape; $\geq 80\%$ soil–water structures functional post-rains; FMNR ToT cohorts active; signed buyer MoUs; ≤ 72 -hour payments for micro-lots with $\geq 30\%$ of lots ($\geq 20\%$ value) to women/youth; one template feeding GBF-T2/NDCs/LDN. That is an achievable start and a credible basis for scale.

“Agroecology is our way of staying on the land and leaving it stronger.”— Smallholder–pastoral household, Drylands

Call to action: Back dryland agroecology now—secure access, finance 8–10 years, scale FMNR + soil–water + adaptive grazing, and report once to GBF-T2/NDCs/LDN.

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