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PyroNam Forestry Group Standard

Public summary of the management plan and monitoring results

ABOUT THIS SUMMARY

This is the public summary of the management plan and monitoring results for the PyroNam Forestry Group Standard, managed by Environmental Compliance Consultancy (ECC) in central Namibia. Revision 1, November 2026.

The group is a set of farms that thin encroacher bush to one agreed set of forestry rules and are checked by ECC. The group certificate is held by Pyrogenic Carbon Capture and Storage Namibia (Pty) Ltd, trading as PyroNam. ECC is the appointed, independent group manager. Each member farm has its own harvesting plan and environmental clearance; this summary describes what all member farms have in common.

The summary is free of charge. More detail, the member list and full monitoring reports are available from ECC on request, with personal and commercially confidential information removed. Contact details are in the last section.

THE LAND AND WHY IT IS THINNED

Member farms lie in the semi-arid savanna of central Namibia. Rainfall is low and unreliable, typically 300 to 500 mm a year, falling in summer. The land is used for cattle, small stock and game.

Much of this savanna is bush encroached. About 45 million hectares of Namibia are affected, at densities of up to 6,000 bushes per hectare in the thickest areas (SAIEA 2015; N-BiG). The main encroacher species in central Namibia are:

- Black thorn (*Senegalia mellifera*)
- Sickle bush (*Dichrostachys cinerea*)
- Red umbrella thorn (*Vachellia reficiens*)
- Silver cluster-leaf (*Terminalia sericea*)
- Purple-pod terminalia (*Terminalia prunioides*)

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Encroachment follows overgrazing and the loss of natural fire. Dense bush takes water, light and nutrients from grass. Carrying capacity on encroached land has fallen by 40 to 90 percent. Dense bush also uses rain that would otherwise recharge groundwater: at 9,000 plants per hectare, bush can absorb a 60 mm daily rainfall event, while below 3,000 plants per hectare a 30 mm event already leaves water for recharge (SAIEA 2015).

Selective thinning aims to bring the land back to an open, mixed savanna: more and better grass, more groundwater recharge, more varied habitat for wildlife, and income and jobs from the harvested wood. The aim is not to clear the land. Total clearing lowers pasture quality and invites heavier regrowth.

MANAGEMENT OBJECTIVES

Every member farm manages its land to these objectives:

1. Restore encroached rangeland to an open, mixed savanna with a healthy grass layer.
2. Harvest only encroacher bush, selectively, and never more than the land can carry.
3. Keep all protected, rare and valuable trees, and the habitats that wildlife depends on.
4. Manage regrowth after harvesting to the farm's chosen objective, either re-harvesting regrowth or keeping the land open through aftercare.
5. Protect soil, watercourses and groundwater.
6. Provide safe, fair and legal work for employees and contractors.
7. Respect neighbours, communities, heritage and cultural sites, and resolve concerns openly.
8. Supply biochar, firewood and roundwood that can be traced to the farm it came from.
9. Monitor the results and adjust management where they show it is needed.

LAND, OWNERSHIP AND MEMBERS

Member farms are privately owned freehold farms, managed by the owner or a manager. Each farm, or each part of a farm placed in the group, is a Management Unit (MU). A farm joins by signing a Memorandum of Agreement with ECC, passing an admission check, and holding a harvesting permit from the Directorate of Forestry and a valid environmental clearance under the Environmental Management Act 7 of 2007.

The certificate, the list of management units and their status, and past audit reports can be checked in the public certificate database at search.fsc.org, by searching for Pyrogenic Carbon Capture and Storage Namibia.

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HOW HARVESTING IS DONE

Harvesting is selective thinning, not clearing. Each member farm works to a harvesting plan that maps the camps to be thinned, the target species, the quantities allowed by its Forestry permit, and the areas to be left alone.

Methods. Members use one or more of three methods:

- **Manual:** axes, pangas and hand saws. Manual harvesting creates the most work opportunities. ECC has also observed that axe damage to the stump leaves 30 to 40 percent of cut target bushes unable to coppice, which already shifts competition back towards grass.
- **Semi-mechanised:** chainsaws or brushcutters, with wood carried and stacked by hand.
- **Mechanised:** machines that cut or extract individual bushes. Machines that bulldoze or roll whole areas are not used, because soil disturbance leads to heavy regrowth.

What is cut and what is kept.

- Only encroacher species are harvested.
- Protected trees listed under the Forest Act 12 of 2001 are never cut, nor are evergreen, riverine and valuable browse trees such as shepherd's tree (*Boscia albitrunca*) and camel thorn (*Vachellia erioloba*). Workers are trained to recognise them.
- Large trees, large dead trees, termite mounds and other micro-habitats are left standing.
- Patches of dense bush and a mix of tree sizes are left, so that the land stays a varied mosaic rather than a uniform open area.
- Enough woody plants are kept after thinning. As a guide, the tree equivalents left per hectare should be about 1.5 to 2 times the average annual rainfall in millimetres, and about 3 times on deep Kalahari sand (a tree equivalent is a single-stemmed tree 1.5 m tall).
- Twigs, leaves and fine material are left on the ground as mulch.

Where no harvesting takes place.

- In or within 100 m of riverbeds and watercourses.
- On slopes steeper than 12.5 percent (1 in 8).
- At graves, heritage and cultural sites, and in any area set aside for High Conservation Values.

How much is harvested. Annual harvesting is limited by the farm's permit and harvesting plan. Where a farm re-harvests regrowth, this happens only once coppice and regrowth have reached harvestable

size, which takes 20 to 40 years (N-BiG). Wood is brought to a central point on the farm before processing, so that ECC can check that only permitted species were cut.

REGROWTH AND AFTERCARE

Most cut stumps regrow unless they are treated, and sickle bush regrows almost without exception (N-BiG). The Namibian forestry standard allows each member to choose one of two management objectives for each thinned area, recorded in its harvesting plan:

Objective	What happens after harvesting
Biomass production	No aftercare. Coppice and regrowth are left to grow and are harvested again once they reach harvestable size.
Rangeland restoration	Aftercare keeps the land open, to raise the carrying capacity for wildlife, small stock, large stock or all of these.

Where aftercare is used, the member chooses one method or a combination, to suit the farm, its soils and its rainfall:

Method	How it is used	Main controls
Browsing and grazing	Goats, cattle or game browse regrowing seedlings and coppice, followed by rest so that grass can recover	Stocking rates suited to the camp; rest periods after treatment
Chemical aftercare	Arboricide applied by hand to cut stumps or regrowth. Areas prone to sickle bush almost always need chemical aftercare, depending on soil type.	Only products on the approved list, each assessed in an Environmental and Social Risk Assessment; registered in Namibia for that use and applied at label rate; no highly hazardous pesticides prohibited under the standard; no use where groundwater lies less than 20 m below ground; no aerial spraying; trained and equipped applicators
Fire	Planned burns at the end of the dry season where there is enough grass to carry a fire, or burning around individual stems	Firebreaks, a fire plan, neighbours informed, burning only in suitable weather; not effective against sickle bush

Fire is the natural form of aftercare in a savanna. The general view in Namibia, however, is that fire is high risk, so it is mostly avoided. The absence of fire is itself one of the causes of bush encroachment.

Aftercare obligations for each member follow its Environmental Management Plan.

ENVIRONMENTAL AND SOCIAL SAFEGUARDS

High Conservation Values. ECC has screened all of Namibia for High Conservation Values (HCVs) in the HCV Assessment Report for Namibia (ECC-0-0-REP-03-A Rev 3, May 2026). The screen uses protected areas and conservancies, community forests, Key Biodiversity and Important Bird Areas, Ramsar sites, rivers and wetlands, vegetation types, threatened and endemic species, heritage records and communal land. Before a new farm is first harvested, the desktop result is checked in the field and with neighbours and other stakeholders. A dataset with no record is not taken to mean that a value is absent. No HCV designation currently applies to the assessed member farms; this is reviewed whenever a trigger is found or a new farm joins.

Wildlife and rare species. Hunting, trapping and snaring by workers is prohibited and is grounds for dismissal. Nests, dens and roosts are left undisturbed, and sightings of rare species are recorded on the Event Card.

Soil and water. Harvesting avoids watercourses, steep slopes and soil disturbance. Fuel, oil and chemicals are stored and handled to prevent spills, and waste is removed from work sites.

Workers. Members employ workers directly or through independent contractors. Every worker has a written contract, is paid on record, is trained in safe work and tree identification, and works with the protective equipment the task requires. Employees receive protective equipment at no cost. No child labour, forced labour or discrimination is permitted. Workers may join a union of their choice and are represented through a worker representative and the grievance procedure.

Neighbours and communities. Neighbours are informed before harvesting or burning near a boundary. Graves, heritage and culturally important sites are protected, and chance finds are reported and left in place. Anyone may raise a concern through the grievance procedure in the last section.

MONITORING AND RESULTS

ECC visits a sample of member farms every year, and each member keeps its own records. Results are compared with the previous year and with the condition of each camp before thinning, together with rainfall, because rainfall drives much of the change in a savanna.

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What is monitored	How	How often
Bush density left after thinning	Tree-equivalent counts and fixed-point photographs in thinned camps	Before and after harvesting
Species harvested	Inspection of stumps and wood at the central point	Each monitoring visit
Quantities harvested	Production records against permit quantities	Monthly by member, yearly by ECC
Grass layer	Grass cover and share of perennial grasses on fixed points	Yearly, end of the rainy season
Regrowth and aftercare	Inspection of thinned camps; aftercare records	Yearly
Chemical use	Products, quantities and areas treated, against the approved list	Each application; reviewed yearly
Rainfall	Farm rain gauges	Each rainfall event
Wildlife and rare species	Event Card sightings; poaching and snaring incidents	Ongoing
Watercourses, slopes and sensitive sites	Inspection against mapped no-go areas	Each monitoring visit
Worker health and safety	Accidents, protective equipment and training records	Ongoing; checked yearly
Grievances and disputes	Event and grievance register	Ongoing
Conformity with the standard	ECC internal monitoring visits; certification audits	Yearly

Results. Monitoring results, including a summary of the latest internal monitoring round, are available from ECC on request. Certification audit reports are published in the public certificate database.

MAPS, CONTACTS AND GRIEVANCES

Maps. A general map of member farm locations, and farm-level maps showing camps, thinned areas and no-go areas, are available from ECC on request.

Contact ECC. Email info@eccenvironmental.com, phone or WhatsApp +264 81 669 7608, write to PO Box 91193, Klein Windhoek, or visit by arrangement. Information can be given in any of Namibia's main languages.

Raise a concern or grievance. Anyone may raise a concern, complaint, grievance or dispute about a member farm or about how the standard is run. It costs nothing, any language may be used, and a name is not required. Use the online form at forms.gle/zyo6LygyCCuKP8bbA, any of the contacts above, or speak to ECC staff on site.

1. ECC records it and confirms receipt within 5 working days.
2. ECC looks into it with the member concerned. A complaint is never decided by the person it is about.
3. ECC responds within 30 days, or explains why it needs longer and by when.
4. If the response is not accepted, an appeal may be made within 30 days and is decided within 30 days by people not involved in the matter.

This does not remove anyone's legal rights, including access to the Labour Commissioner, the Office of the Ombudsman and the courts.

REFERENCES

- Southern African Institute for Environmental Assessment (SAIEA), 2015. *Strategic Environmental Assessment of Large-Scale Bush Thinning and Value-Addition Activities in Namibia.* Commissioned by MAWF and GIZ, Windhoek.
- Namibia Biomass Industry Group (N-BiG). *Harvesting and Processing Encroacher Bush*, 2nd edition, 2023.
- ECC, 2026. *HCV Assessment Report for Namibia* (ECC-0-0-REP-03-A Rev 3). Available on request.