GREENING INDIA

Product Roadmap

Building a farmer lifecycle that keeps trees alive for 30–40 years

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CONTEXT

What Greening India is today

3,000+
farmers enrolled

1M+
saplings distributed

5,000+
acres of planned plantation area

6
states, 19+ districts

- Eternal funds subsidised fruit + timber saplings on land farmers already own, and claims the resulting carbon credits against its net-zero target
- Carbon removal is to be measured and verified using Verra's VM0047 methodology (v1.1). No credits have been issued yet; first issuance is expected FY28
- Current-state understanding from the team: farmer agreements run 30–40 years
- Stated farmer outcome: 50–200% income uplift over time, dependent on species, location and sales channel
- Eternal published figures, March 2026. Saplings distributed; planted and surviving counts are not public

Why the contract is long

Trees that do not survive reduce the removals the project can ultimately claim, which is why registries hold a buffer against reversals. The exact treatment is a methodology question for our carbon partner.

Eternal and the farmer are not optimising for the same thing

Every mechanism in this roadmap exists to close a gap between what Eternal needs and what the farmer needs. Naming the gaps first is what makes the design choices defensible.

What Eternal wants

- Verified removals held over 30 years
- Permanence — the tree still standing at year 30
- Audit-grade evidence at every checkpoint
- Low cost per tCO_2e

What the farmer wants

- Income this year, not year 5
- Low risk on land they depend on
- Flexibility over their own land
- Not to be locked into a 30-year commitment

Aligned: a living, healthy tree serves both.

Misaligned:

- Eternal optimises over 30 years, the farmer over one season
- Eternal wants biomass, the farmer wants fruit
- Eternal needs no felling; timber has resale value to the farmer
- Eternal needs ongoing data; the farmer gets nothing directly from providing it

Design consequence: every mechanism in this roadmap exists to close one of these four gaps.

Working hypothesis: farmer economics is the largest controllable driver of tree survival

Rainfall we cannot control. Agronomy training does not scale to 36,000 farmers. Economics is the lever we can actually pull — if the hypothesis holds.

YEAR 0–3+ no income from the trees | **YEAR 3+** fruit income begins

What the farmer has done

Committed land for 30–40 years, planted, watered, weeded, guarded — through 2 to 5 seasons.

What the farmer has received

A subsidised sapling. No harvest, no cash, and an opportunity cost on land that could have grown a paying crop.

What this produces

The single highest-risk window in the lifecycle. Neglect, felling for firewood, or clearing for a cash crop all end the same way: a dead tree and a reversed credit.

Design consequence: every phase of this roadmap is judged by one question — does it help a farmer get through the gap years without giving up on the tree?

How we'd know we're wrong

If step-zero shows mortality clustering by species, soil or planting season rather than by farmer engagement, the problem is agronomy and nursery quality, not cash — and Phase 2 is rebuilt accordingly.

Three constraints shape every decision that follows

1

Scale without field headcount

Team-provided figure: 1–2 field people per state, pan-India ambition. Farmer-by-farmer field servicing is arithmetically impossible at that ratio — and every rupee spent on operations is a rupee not spent on saplings.

→ Product substitutes for headcount. Field team touches villages, not farmers.

2

A cohort the app cannot assume

Low digital literacy, shared and feature phones, patchy rural connectivity, and no reliable assumption of smartphone-based payments.

→ Fetch, don't ask. Guided one-step-at-a-time flows. Assisted, not self-serve.

3

A 30–40 year relationship

This is the longest-tenure user relationship in Eternal's portfolio. Trust compounds — and so does its absence. A confusing start cannot be patched later.

→ Onboarding is a trust product, not a data-collection form.

STEP ZERO

First, read the farmers we already have

Greening India is not greenfield. There are 3,000+ enrolled farmers and 1M+ saplings distributed — how many were planted, and how many survive, is the first thing we do not know. Everything in this roadmap should be validated against what that base is already telling us.

What we measure — 6 weeks

- Actual survival rate by district, species and planting cohort — the real baseline
- Where mortality clusters: which zones, which species, which villages
- Which farmers have already gone quiet, and what preceded it
- How the existing 3,000 were onboarded, and how long it took per farmer
- What the current field team spends its time on, hour by hour

What it changes

- Sets the real survival baseline every target in this deck is measured against
- Tells us whether the gap-year thesis is right, or whether mortality is concentrated somewhere else entirely
- Identifies which species and zones to expand into, and which to stop planting
- Gives the abandonment-risk model its first labelled examples, years earlier than waiting for new cohorts
- Turns assumptions in this roadmap into evidence before a single line of code is written

This is the cheapest, fastest work in the entire plan — and the only part that can invalidate the rest of it. It runs before Phase 1 build begins, not alongside.

Verified surviving trees under active management

Survival % is gameable by shrinking the denominator. tCO_2 sequestered is the true business outcome but lags by years. This metric is an absolute count that only rises through acquisition and retention, moves faster than carbon, and is directly auditable — paired with survival % as the quality guardrail so growth can't mask mortality.

BUSINESS OUTCOMES	Verified carbon removal (tCO_2e issued or issuable) · programme cost per verified tCO_2e — the number that decides build vs. buy · realised farmer economic value
NORTH STAR	**Verified surviving trees under active management, guardrailed by survival %**
LEADING INDICATORS	Onboarding completion · time-to-onboard · planting completion · check-in completion · input utilisation · mortality detection latency · exception resolution time · payout reliability
LAGGING INDICATORS	Survival at 12 / 36 / 60 months · realised farmer income · verified carbon removal · farmer retention

Causal chain: onboarding quality → check-in completion → early mortality detection → intervention → survival → verified removals → cost per tCO_2e.

Four phases, one metric

Every phase below is measured by its contribution to tree survival rate.

PHASE 1

Acquisition & Onboarding

Right farmer, right land, right species — with near-zero field touch

BUILD

At launch

PHASE 2

Engagement

Surviving the gap years: support, income and verified payouts

BUILD

At launch

PHASE 3

Retention & MRV

Detect abandonment before the tree dies; produce audit-grade carbon data

BUILD

Month 6–12

PHASE 4

Supply Chain

Turn fruit into dependable income via Hyperpure, Blinkit and mandi routing

BUILD

Before yr-3 harvest

Build order note: Phases 1 and 2 must exist at launch. Phase 3 becomes possible once check-in data accumulates (~month 6–12). Phase 4 must be ready before the first harvests land, not after.

What good looks like, against India's record

Tree planting in India has a poor survival record. That is the bar this programme has to clear — and the documented reasons for failure map almost exactly onto the design choices in this roadmap.

We will commit to a survival target once we know the current one. What we can use today is the documented pattern of why programmes like this fail.

Three different things, kept separate: the baseline we're about to measure (step zero) · external benchmarks below (not comparable, used only as a risk checklist) · the internal target we commit to once the baseline exists.

Why Indian schemes fail — and where this roadmap answers each

Inadequate post-planting maintenance	Phase 2 — unconditional inputs and seasonal care prompts
Monoculture plantations	Phase 1 — species portfolio per plot, zone-scored
Weak monitoring	Phase 3 — dual-signal MRV, continuous rather than periodic
Community conflict over land access	Phase 1 — farmers plant on land they already own
Budget discontinuity	Unit economics — funded against Eternal's own credit purchases

These failure patterns come from a single secondary review of Indian tree-planting schemes, not a like-for-like benchmark set — treated here as a checklist of known risks, not a statistical comparison.

SEQUENCING

What gets built, when

Quarters are relative to programme start. Phases overlap deliberately — Phase 2 basics must ship alongside Phase 1, because the first cohort enters the gap years immediately.

V0 — WEEKS 0–6

Step zero

BUILD: none — analysis only

Baseline diagnostic on the existing 3,000 farmers · mortality clustering · field-team time study · contract & legal review

Kill criterion: if mortality clusters by species/soil rather than engagement, Phase 2 is rebuilt as agronomy support, not a cash-gap fix.

V1 — Q1–Q2

Onboard and see

BUILD: onboarding, records
BUY: Aadhaar eKYC

Guided onboarding (document-based land verification default) · species master list · farmer/plot/tree record · seasonal check-in v1 · input tracking

Kill criterion: if check-in completion stays below ~40% even with sarpanch assistance, remote verification isn't viable — needs field capacity instead.

V1.5 — Q3–Q4

Test the economics

BUILD: stipend engine
BUY: DBT/UPI payout rail

Support-layer experiment in a subset of districts · payout rail · farmer visibility (status, payment, reason)

Kill criterion: no measurable survival delta vs control districts → cash is not the lever; redirect budget to inputs and agronomy.

V2 — YEAR 2

Prove it at audit scale

BUILD: exception queue, dashboard
BUY: MRV partner

Satellite cross-check · rule-based exception queue · MRV partner onboarded · first VM0047 monitoring cycle · leadership dashboard

Kill criterion: MRV dataset gaps a verifier would reject → the architecture needs rework before scaling further.

LATER — YEAR 3+

Market linkage & scored risk

BUILD: image model, marketplace

Harvest declaration and pickup · graded routing and compensation engine · scored abandonment-risk model once labelled data exists

Gate: each depends on an assumption not yet validated upstream — not started until its prerequisite stage clears its kill criterion.

Deliberately NOT in V1: stipend engine, image classification model, satellite integration, village leaderboard. Each depends on an assumption not yet tested — building them early is how eighteen months goes into something nobody needed.

Team: ~10 core (1 PM · 1 designer · 5–6 engineers · 1 data scientist · 2 central ops) + 2 field per state. MRV is a contracted partner, not headcount. Roughly ₹3–4 Cr/yr fully loaded — ~4–5% of the ₹247 Cr envelope over three years.

PHASE 1

Acquisition & Onboarding

Goal

Get the right farmer, on the right land, growing the right species — at village-cohort scale, with near-zero per-farmer field cost.

Why it matters to the north star

- A species mismatched to soil or climate dies regardless of how good the engagement product is
- A farmer who misunderstood the commitment churns in year 2
- Land without clean title or a succession plan can exit the programme for reasons no product can prevent

PHASE 1 · ACQUISITION

Community-led, not field-led

The field team's unit of work is a village, not a farmer. NGO partners carry the trust; the sarpanch opens the door; the product does the rest.

1

NGO partner

Team-provided: existing partners identify candidate villages and broker the introduction to the sarpanch — trust the team says already exists, not cold outreach we'd be building from scratch.

→

2

Sarpanch

Convenes the village. Social legitimacy that no app screen can manufacture, and local knowledge of what actually grows here.

→

3

Cohort event

One facilitated session onboards many farmers at once. Field team facilitates and captures — it does not decide.

→

4

Platform

Species proposal, verification and approval run centrally. One decision framework across all states.

Designed against the constraint

- Village-level acquisition means field cost scales with villages, not with farmers — the only way 1–2 people per state reaches pan-India coverage
- Peer visibility inside a village cohort becomes a retention asset later: neighbours can see whose trees are thriving
- Open risk to solve: sarpanches are elected and turn over every ~5 years. Continuity must live in the farmer record, never in one relationship

Fetch, don't ask

Every field a farmer has to fill in is a place they can drop off. The design principle is that the backend does the work the user would otherwise have to do.

Integrations replace forms

Identity	Identity verified through the authorisation route available to a private programme — to be confirmed with legal. Document-based verification assumed as the default
Land	Default: farmer uploads the Record of Rights (7/12, khatauni, jamabandi), extracted automatically and matched to the plot geotag. Direct API integration where a state MoU exists — the exception, not the rule
Location & zone	GPS/pincode auto-maps the agro-climatic zone; the farmer never selects it
Payout rail	Aadhaar-seeded bank account (DBT) as default. UPI only where the farmer already uses it; assisted cash-out via NGO/business correspondent as fallback

Guided step-by-step assistant

Modelled on the Zomato delivery-partner onboarding flow

- One action per screen — never a long form
- Icon and image led; minimal text on screen
- Regional-language voice guidance at every step
- Species narrowed to 1–2 recommended options, never a table to interpret
- Progress is saved and resumable — connectivity drops are expected, not exceptions
- NGO or field facilitator physically present at the cohort event for live hand-holding on first use

Success measure for this phase: onboarding completion rate per village cohort, and time-to-complete per farmer — both instrumented from day one.

Species selection is a survival decision

Two things must be true of every plot: it must sequester carbon for Eternal, and it must pay the farmer enough to keep the trees standing. Rarely does one species do both.

Zone detected	GPS/pincode maps the plot to an agro-climatic zone
Master list surfaces	Pre-approved species for that zone, scored on carbon potential and market access
Village proposes	Sarpanch, NGO and farmer choose from the list — auto-approved if within bounds
Central team reviews exceptions only	Off-list species or edge-case zone fits. 1–2 people, pan-India

Every plot carries a portfolio

- **Bridge crop**
  Fast cash within months where the zone supports it — the farmer's income in years 1–3
- **Fruit tree**
  Recurring annual income from year 3–5 onward; the long-term reason to stay
- **Canopy / timber**
  Carbon density and shelter value for the crop beside it — never planted to be felled

Design decision worth flagging:

Timber is not an income line. If a farmer's return on a timber tree is felling it, the programme has paid to create its own carbon reversal. Timber earns its place through shelter value for the crop beside it, or through non-destructive harvest species such as bamboo. This requires an explicit no-felling provision in the farmer agreement. **Business and legal decision required — I have not reviewed the current contract.**

What onboarding captures — and why

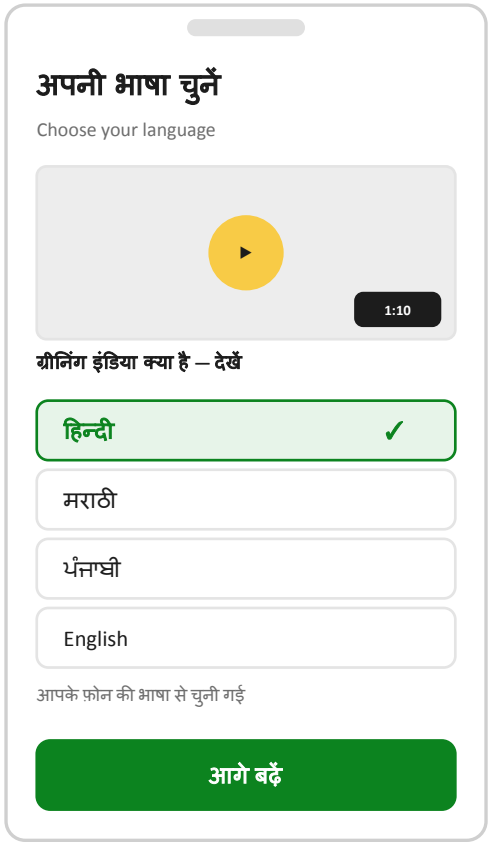
Onboarding is the only moment the programme has undivided attention for the next 30 years. Everything downstream — risk scoring, MRV, payouts, produce routing — depends on what is captured here.

Captured	Detail	Why it earns its place
Identity	Aadhaar-verified ID, phone, preferred language and channel	Enables assisted and voice-first contact for the whole lifecycle
Land	Ownership or lease record, plot geotag, acreage, current use	Legal foundation of a 30–40 year agreement
Species & plot plan	Selected mix, planting density, zone	Baseline for survival tracking and expected income timing
Agreement	Term, subsidy schedule, no-felling clause, succession nominee	Protects carbon permanence across inheritance and land transfer
Attestation	Sarpanch / NGO endorsement	Social legitimacy — recorded separately from legal land verification
MRV baseline	Geotagged pre-planting plot photo, soil type	The zero-point every future carbon measurement is compared against
Household context	Other income sources, household size	Leading features for the abandonment-risk model in Phase 3
Payout & off-take	Payment rail, nearest Hyperpure / Blinkit / mandi point	Determines whether income is deliverable at all

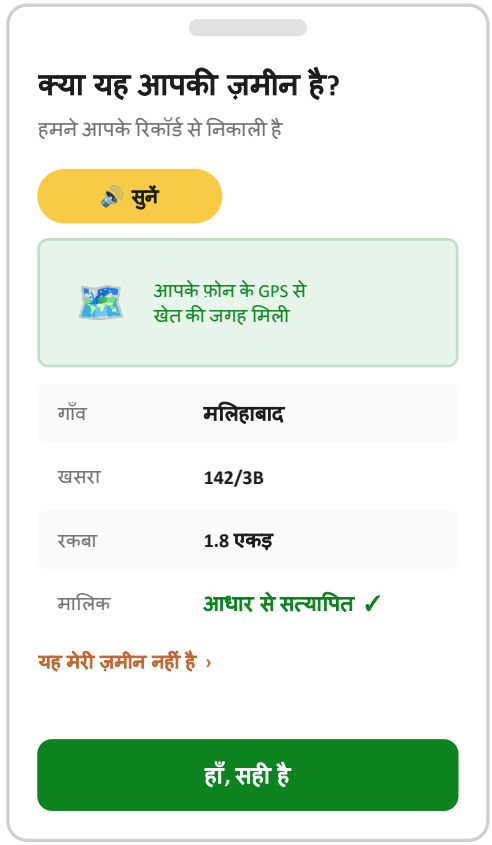
Off-take is not promised at onboarding. We commit only to what we can deliver: inputs, support, and transparency about what is and isn't guaranteed. What onboarding does explain is how Phase 4 works — graded routing to Hyperpure, then Blinkit, then mandi and aggregator networks — and a capped stipend if none of them take the harvest.

Onboarding: watch, listen, tap once

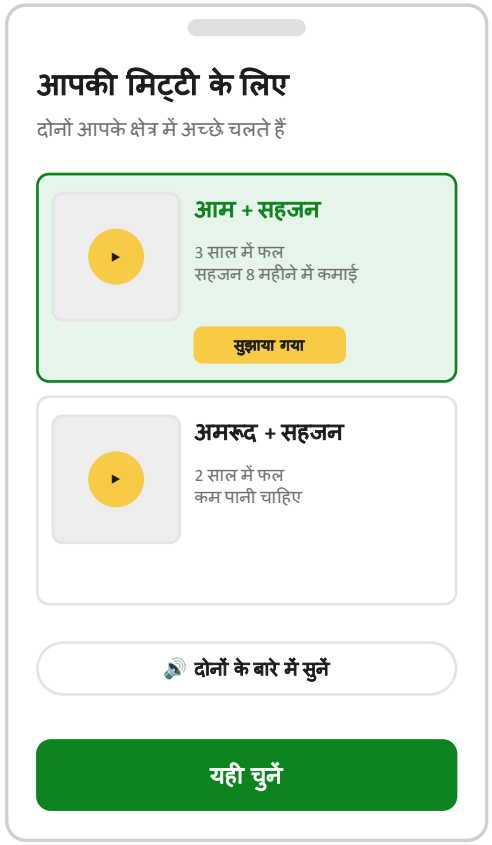
Voice and video carry the flow; text only labels it. Once a language is chosen the entire product speaks it. Design language borrowed from Blinkit — high contrast, large type, one action per screen.



1 · भाषा · Language



2 · ज़मीन



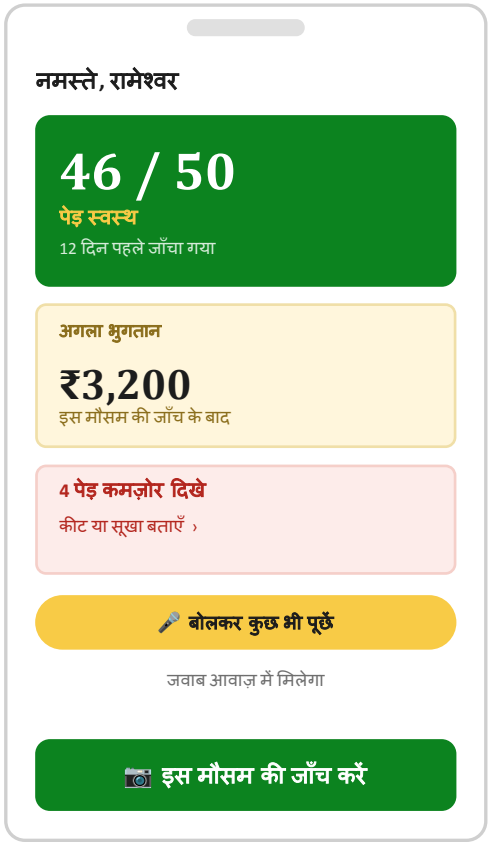
3 · क्या लगाएँ

4 · प्रस्तावित शर्तें · Proposed terms

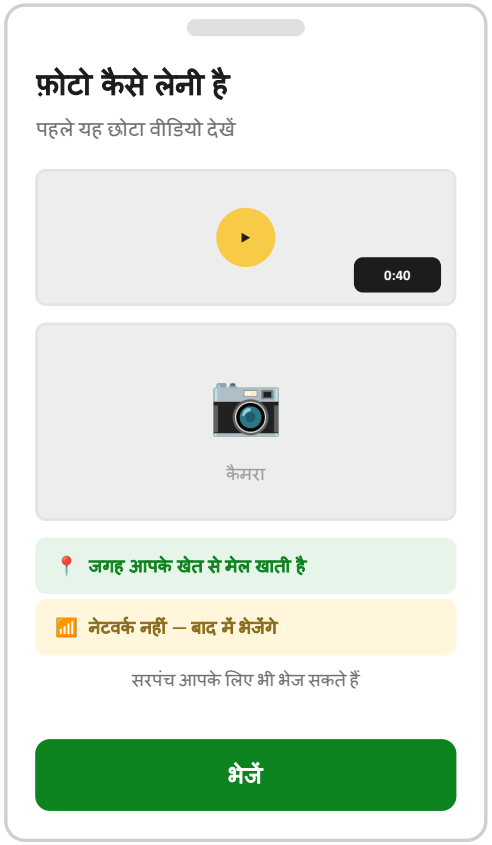
Four screens, four taps. Identity, land and location are fetched; species is narrowed to two — and screen 4 is deliberately labelled proposed: none of those terms are approved company policy yet.

Living with it: seasonal, spoken, one tap

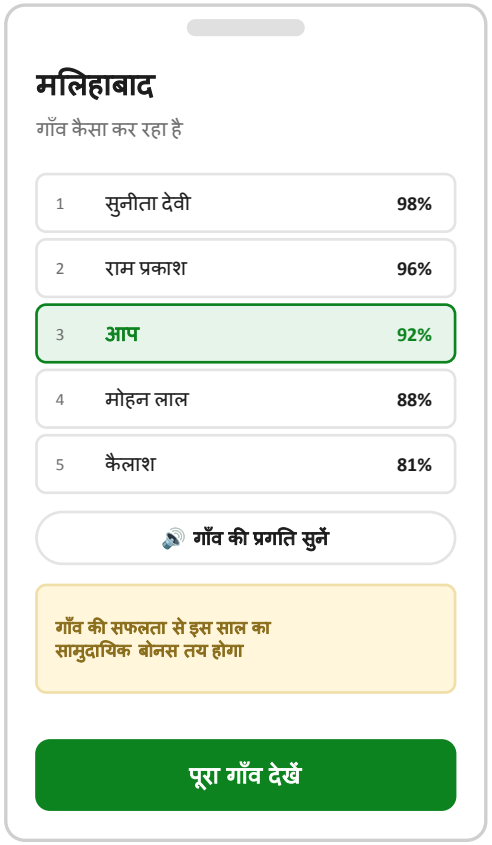
After onboarding the app shows three things — where the trees stand, what is owed, and how the village is doing. A voice assistant answers anything else, so nothing depends on reading.



होम · Home



मौसमी जाँच · Check-in



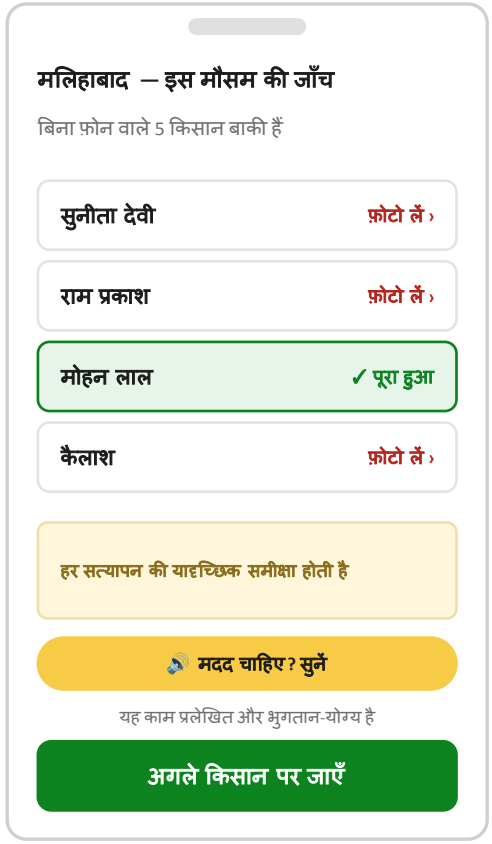
गाँव · Village

No carbon figure anywhere — it invites a conversation about who profits from these trees, worth having with farmers directly rather than through a dashboard tile.

PHASE 2 · WIREFRAMES

The proxy path: sarpanch checks in for those without a phone

Not every farmer has a smartphone. This screen is how a check-in still happens for them — and why that proxy path is audited, not trusted blindly.



सरपंच सत्यापन · Sarpanch check-in

Why this screen exists

- Farmers without a smartphone are not excluded from verification — the sarpanch or village champion submits on their behalf
- Every proxy submission is logged as sarpanch-attested, never blended silently with a farmer's own submission
- Eternal audits a random sample of sarpanch submissions each season, cross-checked against satellite where available
- The role is compensated as documented village work — trust is a safeguard here, not a free input
- This is the deliberate answer to a named risk: verification captured by one person in the village (see failure modes)

PHASE 2

Engagement

Goal

Carry the farmer through the years when the trees cost effort and return nothing — without paying for compliance theatre.

Why it matters to the north star

- The establishment years are expected to carry the highest mortality risk of the relationship — step zero will confirm whether that's true here
- A farmer who disengages does not announce it — the tree simply stops being watered
- Every rupee spent here protects a sapling Eternal has already paid for, and a credit it has already committed to deliver

Test the lowest-cost intervention that closes the income gap

This is a testable design, not a committed entitlement. It only activates if Step Zero confirms farmer economics is a material driver of survival — and it starts with the cheapest lever, not the most expensive one.

1	**Bridge crops**	Where agronomically viable — fast-cash companion species between the rows, paying within months. Cheapest: no recurring cash outlay.
2	**Inputs, irrigation, replenishment**	Fertiliser, water access, replacement saplings. Addresses cost of failure, not income gap directly
3	**Conditional cash support**	Tested only where 1–2 don't close the gap. Released against verified survival, not attendance. The most expensive lever — tried last, not first.
4	**Other interventions data surfaces**	Step Zero and the V1.5 experiment may point to a driver we haven't listed — the ladder is not assumed exhaustive.

If a stipend is validated — candidate sizing logic to test, not a fixed formula

Scaled by land area and tree count · floored so the smallest farmers aren't the least protected · tapered down as fruit income begins rather than stopping abruptly. Every one of these is a design parameter for the V1.5 experiment, not a number anyone has approved.

PHASE 2 · VERIFICATION

Paying for survival, not for attendance

Cadence is seasonal, tied to each region's harvest cycle. Two independent signals — one from the ground, one from orbit — and a human only where they disagree.

1

Seasonal check-in

Geotagged photo of the plot. Farmers with a smartphone submit directly; the sarpanch or village champion submits on behalf of those without.

→

2

Ground verification

V1: geotag, timestamp and sampled human review. Image classification is added only once that review has produced labelled data — we are not building a model before we have labels.

→

3

Satellite cross-check

Independent canopy signal from year 3 onward, validating the ground submission rather than replacing it.

→

4

Payout or exception

Match, and the stipend releases automatically. Mismatch, missed check-in or disputed claim routes to the field team.

Two blind spots we design around, not past

- Satellite cannot resolve individual saplings in years 0–3 — the highest-risk window is where it is weakest
- Optical imagery is blocked by monsoon cloud for weeks at a time. Ground verification is a permanent complement, not a temporary crutch
- Sarpanch-submitted check-ins concentrate trust in one person — Eternal audits a sample of sarpanch submissions each season, and compensates the role as documented village work

The safeguards that stop the model backfiring

A conditional payout system creates three ways to lose a farmer unfairly. Each needs an explicit answer, or the mechanism designed to protect survival starts destroying it.

Proposed policy — requires business & legal decision

Trees die and it is not the farmer's fault	Drought and flood are detected centrally and applied to whole regions automatically. Pest and disease are farmer-raised, checked against neighbouring plots for village-level anomaly, co-attested by the sarpanch, and capped per farmer per period. Outcome: free replenishment saplings, stipend intact.
The farmer cannot see why they were or were not paid	In-app visibility of tree health status, next payout date and amount, and the specific reason any payout was withheld. A village leaderboard on survival makes progress visible and social. Carbon figures are deliberately not shown — they invite a conversation about value-sharing that belongs elsewhere.
The farmer needs to leave	Death routes to the succession nominee captured at onboarding. Illness or migration routes to a caretaker, with the stipend redirected. Voluntary exit requires notice and a handover attempt, but carries no subsidy clawback. The penalty attaches to felling trees, never to leaving the programme. None of these terms exist in the current agreement to my knowledge.

Design principle: a punitive exit clause does not keep farmers in — it converts a clean handover into a neglected plot that Eternal discovers two years later.

PHASE 3

Retention & MRV

Goal

Catch a farmer disengaging before the tree dies — and produce carbon data that survives a third-party audit.

Why it matters to the north star

- Survival rate is not just the metric — it is the asset. Weak survival evidence means weaker, slower or contested credit issuance, subject to what our MRV partner and the registry ultimately accept
- A dead tree discovered two seasons late is unrecoverable; the same tree flagged early is a phone call
- Higher-rated carbon projects earn materially more per tonne, so MRV quality is a revenue lever, not overhead

One data model, two output pipelines

The same tree-level record serves two consumers with very different standards of proof. Building one and bolting the other on later is how carbon programmes fail audit.

Farmer + plot + tree data model

Identity · land · species · planting date · check-ins · photos · satellite signal · replenishments · payouts · claims

Retention pipeline

Internal · continuous

- Rule-based triggers first: missed check-ins, satellite anomaly, disputed claims
- Scored abandonment-risk model added once labelled churn data exists — not on day one
- Exception queue routes the sparse field team only where signals disagree
- Replenishment workflow, capped: repeated failure exits the plot and reallocates to a new farmer

MRV & leadership pipeline

External audit + internal reporting · periodic

- Audit-grade sample measurement by a specialist MRV partner; in-house build evaluated later
- VM0047 monitoring reports: survival counts, growth, mortality and replenishment history
- Leadership view: tCO_2 sequestered, farmers onboarded, acres under plantation
- Spend to date against carbon credits generated — the unit-economics view

Design consequence: a metric that is good enough for an internal dashboard is not automatically good enough for a Verra verifier. The rigour bar is set by the stricter consumer.

PHASE 4

Supply Chain

Goal

Turn the harvest into income the farmer can rely on — the payoff that makes staying for four decades rational rather than charitable.

Why it matters to the north star

- Once fruit arrives, the stipend should stop being the reason a farmer stays — the harvest should be
- Eternal has adjacent demand-side infrastructure. Whether it can absorb this produce economically is an open commercial question, not a given
- Must be operational before the first significant harvests land, not built in response to them

Market linkage: hypothesis to validate, not a guarantee

Selling to Eternal is optional, never mandatory. Where a channel exists, the farmer is made an offer and chooses — no channel is obligated to buy, and none of this is confirmed with the category teams yet.

Hyperpure	Restaurant-grade produce, meeting B2B quality and volume thresholds. Potential channel — subject to category, quality and volume economics.
Blinkit	Consumer-grade, different quality bar and smaller lot sizes. Potential channel — subject to category, quality and volume economics.
Mandi & aggregators	Below Eternal's buying threshold — the platform brokers the connection rather than purchasing.

Farmer grading drives the offer: Check-in consistency · satellite plot signal · historical produce quality · claim history. A farmer with a strong record gets a better offer and earlier pickup — turning Phase 2 and 3 behaviour into a tangible Phase 4 reward.

PHASE 4 · DEPENDENCY

The off-take promise depends on geography

A farmer three hours from the nearest collection point cannot sell perishable fruit into Hyperpure, whatever the app says. Physical proximity is the constraint the whole channel rests on.

What is public today

- 11 Hyperpure warehouses across India
- 100,000+ outlets served in FY25
- Already sources directly from farmers, with cold chain
- Greening India spans 19+ districts across 6 states

What we do not know

District-level collection-point locations are not public. Until Hyperpure's sourcing team shares that footprint, the overlap between where Greening India plants and where Eternal can actually collect is unverified.

Named data request — not an assumption

- Ask Hyperpure sourcing for district-level collection points, categories procured, and volume tolerance by node
- Overlay against Greening India's planted districts to produce a served / unserved map
- Feed the result back into Phase 1: district selection for new villages should favour areas already within collection reach
- Where no overlap exists, the mandi and aggregator tier is the primary channel — and the off-take promise must be worded accordingly at onboarding

WHY THIS, WHY US

Why wasn't this solved already? It's being worked on — just not from this position

Agri-carbon MRV in India is not unclaimed ground. Varaha, Boomitra and others operate in this space. What none of them have is Eternal's specific structural position.

Eternal is the buyer of its own credits	Internal demand, not a merchant model — removes the off-take risk every carbon startup carries.	*Verified*
Adjacent demand-side infrastructure	Hyperpure sources from farmers today, 11 warehouses, cold chain — optionality, not yet a proven produce channel.	*Verified, but optionality only*
Existing farmer base and NGO relationships	3,000+ farmers and partner trust already in place, per the team.	*Team-provided*
Balance-sheet patience	An FY28 credit horizon is survivable for Eternal in a way it typically isn't for a venture-funded carbon startup.	*Inference — not verified against Eternal's actual capital position*

The moat, honestly stated

Not the app. The moat is a longitudinal, audit-grade dataset on a farmer cohort under a multi-decade agreement, owned by the entity that consumes the output. That compounds over time and is difficult for a new entrant to recreate quickly. We do not claim competitors can't do MRV, or that Eternal has a supply-chain advantage that hasn't been tested.

The framework, not an invented number

I don't have baseline farmer income data, and I'm not going to fabricate it. What I can show is the framework, and which variables the answer is most sensitive to.

Net farmer value = *(expected revenue from the plot + support received) − (incremental labour + input/water cost + opportunity cost of the displaced crop) − (risk × waiting period)*

Data required, by dimension — none of it collected yet

Current land use	Crop, yield, price realised, net margin/acre
Plot	Acreage committed, irrigation access, soil
Species	Time to first commercial yield, expected yield, price
Support	Value of inputs and any cash support
Labour	Incremental hours vs. the displaced crop
Risk	Historical mortality, weather variance
Market	Distance to buyer, realised vs. mandi price

The point of this slide is not the answer. It's showing which five numbers determine whether this works, and that we'd go get them — most sensitive to time-to-first-yield, the displaced crop's margin, and water availability.

Economic ceiling — a scenario, not a programme budget

Eternal is not selling these credits — it is retiring them against its own footprint. So one way to bound the programme's value is the cost avoided versus buying equivalent credits. Nothing on this slide is an approved number.

2.5M
trees at target
PLANNING ASSUMPTION

1.5M
tCO_2 over 30 years
MODELLED ESTIMATE

~7,500
farmers at target scale
ESTIMATE, NOT PUBLISHED

~15%
held in Verra buffer pool
METHODOLOGY-DEPENDENT

DERIVED SCENARIO — depends on the counterfactual below

Asia ARR	$14 / tCO_2e	~₹157 Cr
Global ARR average	$22 / tCO_2e	~₹247 Cr
High-rated ARR	$32 / tCO_2e	~₹359 Cr

Pricing: EXTERNAL INPUT (Sylvera, 2026). ₹ scenarios: DERIVED — no scenario here is a chosen or approved number.

MODEL ASSUMPTION — illustrative, not a committed stipend

₹10,000–15,000

per farmer per year, IF a cash intervention is validated — see the support-model slide

Back-calculated from the ₹247 Cr scenario, assuming ~40% is farmer-facing and front-loaded into years 1–5. Change the scenario or the 40% assumption and this range moves with it.

What this ceiling depends on — the decision nobody has made yet

This ceiling assumes Eternal's alternative is buying ARR removal credits. If the real alternative is lower-cost avoidance credits, the ceiling falls sharply; if it is high-rated removals, it rises. Which counterfactual applies is a business decision that has not been made — and it sets the entire programme budget, not this slide. Figures are undiscounted; at a 10% discount rate the present value is materially lower.

The five ways this fails, and what we watch

These are documented failure patterns identified in the review of Indian tree-planting programmes. The mitigation matters less than the leading indicator — the thing that tells us it is happening while there is still time to act.

FAILURE MODE	MITIGATION IN THE PLAN	LEADING INDICATOR WE WATCH
Silent neglect in the gap years	Unconditional inputs plus a conditional stipend, seasonal verification, and dual-signal detection	Falling seasonal check-in completion rate, before survival itself moves
Verification captured by the sarpanch	Sample audits of sarpanch submissions, satellite cross-check, capped no-fault claims per period	Villages whose reported survival diverges from their satellite canopy signal
The income promise never lands	Bridge crops from year 1, graded off-take routing, capped compensation for unsold produce	Share of harvest placed through any channel, and realised income against projection
MRV fails audit and credits do not issue	MRV partner from day one, VM0047-shaped data model, replenishment logged rather than hidden	Gaps or low-confidence records in the monitoring dataset, checked well before a verification cycle
The cash-gap hypothesis is wrong	Step zero tests it before Phase 2 is built. If mortality clusters by species, soil or season rather than by engagement, Phase 2 is redesigned as agronomy support, not a cash-support product	Step-zero finding: mortality correlates with species/soil/season more than with farmer engagement signals

The pattern: every mitigation produces a signal that moves before survival does. A programme measuring only survival finds out too late.

What is still open, and what is deliberately out

Separated on purpose: decisions the product team cannot make alone, numbers not yet set, and scope consciously left out of v1.

NEEDS A BUSINESS OR LEGAL DECISION

Land sale during the term

A buyer may not farm at all. Does the agreement travel with the land, or end at sale?

Owner: Legal · By: Before V1 launch

Titling is presumptive

Indian land records evidence ownership but do not guarantee title over 40 years.

Owner: Legal · By: Before V1 launch

State land-record API access

Coverage and MoU feasibility vary by state, and drive rollout sequencing.

Owner: Partnerships · By: V1 state plan

NGO partner supply

Enough partner reach for pan-India, and what is the concentration risk?

Owner: Field Ops · By: V0 exit

Species carbon data

Per-species rates by zone must come from a forestry partner or ICAR-CAFRI.

Owner: Forestry partner · By: Before species list locked

Sarpanch compensation

Governance clearance for paying an elected office-holder for verification work.

Owner: Legal/Governance · By: Before V1.5 payout design

Replanting & baseline

Does a replacement tree restart the VM0047 clock, delaying credits for that plot?

Owner: MRV partner · By: Before V2 monitoring cycle

Hyperpure district footprint

Collection-point overlap with planted districts — detailed on the geography slide.

Owner: Hyperpure sourcing · By: Before V2 / Phase 4 plan

NUMBERS STILL TO BE SET

- Stipend quantum and floor within the ₹10,000–15,000 envelope
- Buy-versus-broker threshold: the quality and volume bar above which Eternal purchases
- Compensation cap per farmer per season for unsold quality-grade produce

DEFERRED SCOPE — OUT OF V1 BY CHOICE

- Tenant farmers and sharecroppers — too early to design for them well
- FPO and group onboarding — a potentially larger scale lever, unexplored
- Scored abandonment-risk model — rules first, model once labelled churn data exists

Everything above is tracked and taken to the business, rather than assumed away inside the plan.