

# Green Paper 06 — Planetary Boundaries as Ethical Constraint

Green Papers: Notes Toward Planetary Guardianship

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**Author's note — AI co-creation.** These papers are working notes authored by Lars A. Engberg. They were drafted and edited in conversation with an AI language model (*GPT-5 Thinking mini*). The AI assisted with phrasing, organization, and initial drafting; the author curated, edited, and is fully responsible for substantive claims, omissions, and interpretations. Where passages were substantially shaped by the AI, this is indicated in the editorial log. The work is offered as field notes and an experiment in collaborative composition rather than a finished, peer-reviewed product.

## Abstract

Planetary boundaries are not abstract targets for policy: they are ethical constraints. When a limit is crossed the world changes in ways we cannot simply trade off. Ethics, therefore, must learn to act within constraints rather than treat the planet as an expandable space for human ends.

This paper argues that attention to irreversibility, long time horizons, and grief reorients practice: design under constraint, distributional honesty about burdens, and governance that privileges viability over short-term optimization.

The aim here is modest and practical: to sketch what an ethics shaped by planetary thresholds looks like — not as a doctrine but as a set of habits, practices, and institutional arrangements that make responsible life possible.

## 1. Thresholds as moral facts

Planetary boundaries function like constraints in engineering or physiology: they mark regions where processes change qualitatively. Acknowledging them is not ideological; it is an ethical reading of facts with moral bearing. The existence of thresholds transforms permissible action.

## 2. Irreversibility and delayed consequences

Many ecological processes are time-asymmetric: consequences arrive after long delays and may be irreversible. Ethics that ignores delay — or treats time as neutral — fails those who will live after us. Long horizons demand prudence, precaution, and institutional memory.

### 3. Grief, recognition, and moral imagination

Practical ethics must include practices for grief and loss. Grief here is not private sentimentality but a collective capacity to recognize damage, mourn what is gone, and recalibrate ambitions. Without rituals of recognition, denial fills the political space.

### 4. Uneven burdens and justice under limits

Boundaries do not fall evenly. Some populations shoulder early and enduring costs of constraint. Ethical designs therefore require explicit mechanisms for distribution: reparative transfers, differentiated obligations, and governance that centers the vulnerable when resources and ecological space are scarce.

### 5. Design and governance under constraint

Design under planetary constraint is constrained design: it privileges sufficiency, resilience, redundancy, and reversibility where possible. Institutions must be built to detect slow signals, hold precautionary buffers, and refuse growth models that presume endless substitution.

### 6. Minimal protocols for practice

1. Adopt boundary-respecting metrics as primary governance inputs (not secondary sustainability labels).
2. Enshrine long-horizon assessments in policy review cycles and institutional audits.
3. Create mechanisms for differentiated burden-sharing with explicit reparative pathways.
4. Support civic practices to metabolize grief and share recognition publicly.
5. Design for reversibility and staged retreat where systems show irreversible change.

#### Methods / Editorial note

These Green Papers are written as field notes and working reflections. The drafting process combined (1) authorial writing and revision, (2) iterative prompts to an AI language model for drafting and editing, and (3) conventional editorial revision. Key practices:

- **AI assistance:** The AI produced early drafts and suggested language; the author reviewed and revised every paragraph.
- **Sourcing:** The papers use a “working bibliography” as orientation rather than a formal literature review. Citations are selective; empirical claims should be verified before formal use.
- **Verification:** The author is responsible for verification of cited sources and accepts responsibility for errors. Prior to academic submission, each reference and empirical claim should be independently checked and expanded.
- **Versioning:** Each paper carries a version line (v0.1). Substantial revisions will be tracked in a change log at Planetary Guardians / Spiralweb.

## Closing questions

- How should institutions balance short electoral cycles with geological time?
- What practices help communities process grief for lost ecologies in ways that sustain action?
- Which design principles reliably support viability when resources are limited?
- How to make burden-sharing transparent and politically legible?
- What indicators best translate planetary thresholds into governance triggers?

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