pachatopia.org whitepapaer

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1   introduction

Pachatopia is an association that creates nature reserves and promotes sustainable agriculture and eco-responsible living, inspired by Indigenous respect for the Earth.

Pachatopia is building a *blockchain-based map* to track its land use, allowing donors to sponsor land parcels and receive on-chain rights to their produce, community membership, and educational access—advancing ReFi accountability while laying the groundwork for a genetic bank preserving the region's unique plant biodiversity.

2   technical implementation

2.1   web2 details

Pretty much the frontend and the backend concerns of the app. A backend is still required, as it is too early to go for a decentralized storage infrastructure like *IPFS*

2.1.1   tech stack

- **Vite + React** - fully open source frontend library, universal choice
- **TailwindCSS + shadcn** - allows enough customization & flexibility for getting the UI done right
- **ConvexDB & @convex/auth** - prolly the best option nowadays
- **react-leaflet** - React integration
- **leaflet-draw** - admin polygon drawing/editing
- **turf.js** - geospatial calculations (area in m^2, parcel splitting, overlap detection)

2.2 blockchain infra

KISS *(keep it simple stupid)*, everything on the ethereum chain can be done quite easily.

- **ERC-721** - each m^2 is unique, this is the perfect standard to identify each one of them

- **Guild.xyz** - the gatekeeper, provides an *identity portal*

- **Snapshot** - gasless voting, good for establishing the *DAO*