fundación FUTURO

HIDROAGUAGRÚN

A community-owned micro hydro plant
caring for life in all its forms

Renewable Energy · Local Economic Development · Watershed and Biodiversity Protection

fundación FUTURO

HIDROAGUAGRÚN

A community-owned micro hydro plant caring for life in all its forms

Intag Valley · Andean Chocó · Ecuador

300 kW	2.1 GWh/yr	$500K	19 families	30 yrs
Installed capacity	Annual generation	Total investment	Community owners	Plant life

A GLOBAL AND LOCAL CHALLENGE

Energy production drives development but when it is fossil fuel dependent, it also drives climate change. Demand is growing faster than supply, and shifting to clean, renewable sources is a global strategic priority.

Ecuador has faced an energy crisis for decades. The country holds enormous hydroelectric potential but it sits inside ecosystems of global importance, stewarded by communities that have never participated in or benefited from that industry.

For that potential to be sustained, rivers must maintain their flow. And that depends on healthy watershed ecosystems.

THE PLACE: INTAG · ANDEAN CHOCÓ

The Andean Chocó is the most endemic region per km2 on Earth where the Chocó Darien and Tropical Andes hotspots converge. Within it lies the Intag Valley, the largest watershed in northern Ecuador: 21 sub-watersheds channeling water from páramo at 4,000 m down to subtropical forest at 500 m.

Intag's communities have spent three decades living alongside these ecosystems and organizing to protect their source of life and prosperity: water.

THE SOLUTION: HIDROAGUAGRÚN

HidroAguagrún is a 300 kW run-of-river micro hydro plant. It feeds Ecuador's national grid, finances conservation of the watershed that makes it possible, and increases the community's decision-making power over their own development. The plant captures water from the Aguagrún River at 2,018 m, conducts it through ~850 m of pipe to a powerhouse at 1,912 m, and returns it to the river with no loss in quality.

A key innovation: a conventional hydraulic pump operated in reverse – proven locally before scaling – replaces costly turbines and makes the model replicable.

HIDROAGUAGRÚN

AN UNPRECEDENTED LEGAL MODEL

HidroAguagrún Cía. Ltda. BIC (Benefit & Collective Interest company) holds the generation license and sells energy to the national grid. It is the first Solidarity Economy association for renewable energy generation in Ecuador, opening a legal path no community had crossed before.

SHAREHOLDERS	
• 90% Asociación Río Aguagrún (19 families) • 5% Corporación Toisán • 5% Fundación Futuro	Toisán and Fundación Futuro contributed over half the financing yet chose symbolic stakes with full voting rights to accompany governance without diluting community equity.

FINANCING

- $25,000 – Asociación Río Aguagrún (cash + community labor days)
- $200,000 – AECID Innovation Fund (managed by Toisán)
- $250,000 – Fundación Futuro

All external capital is reimbursable – because if the project proves it can return what it cost, it is replicable.

REVENUE & DISTRIBUTION (YEAR 1–10)

Annual energy sales: ~$120,000

- $40,000 Operations & maintenance
- $60,000 Tripartite trust fund for replication
- $17,000 Profit (90% to families, 10% to partners)

From Year 11 (capital repaid): annual surplus rises to $80,000.

50% of family profits must by law fund conservation: forest purchase, biodiversity monitoring. The other 50% is direct income to the 19 families.

THE DIFFERENCE WHEN THE COMMUNITY OWNS IT

A shareholder waits for a dividend. An owner becomes an agent of change.

- Local builders, transporters, mechanics, and monitors were the first choice during construction – building technical capacity that stays in the valley
- 17 rural businesses improved income and skills
- 28 leaders and young people trained in sustainable energy communities
- 11 permanent jobs created in operations, monitoring, and ecotourism
- 345 people gain 30-year autonomous conservation financing

In 10 years, the 19 families will own a plant valued at half a million dollars.

MORE THAN A PLANT: A MODEL TO REPLICATE

More Than a Plant: A Model to Replicate

When a forest becomes energy infrastructure, the country has a strategic reason to protect it. Conservation stops being a cost – it finances itself.

Investing in replicas means capitalizing a mechanism that turns ecosystems into national energy infrastructure, communities into shareholders, and conservation into a self-funded strategy – in one of the most biodiverse and most threatened regions on Earth.

- HidroAguagrún is the proof of concept, not the final goal:
- 5 additional sites identified in Intag (300 kW–1 MW each)
- Tripartite trust reinvests $60K/yr from HidroAguagrún into each next project
- Fundación Futuro developing financing models to accompany each new community

fundación
FUTURO

CONTACT US

Carolina Proaño-Castro
Executive Director
cproano@futuro.com.ec

www.fundaciónfuturo.org