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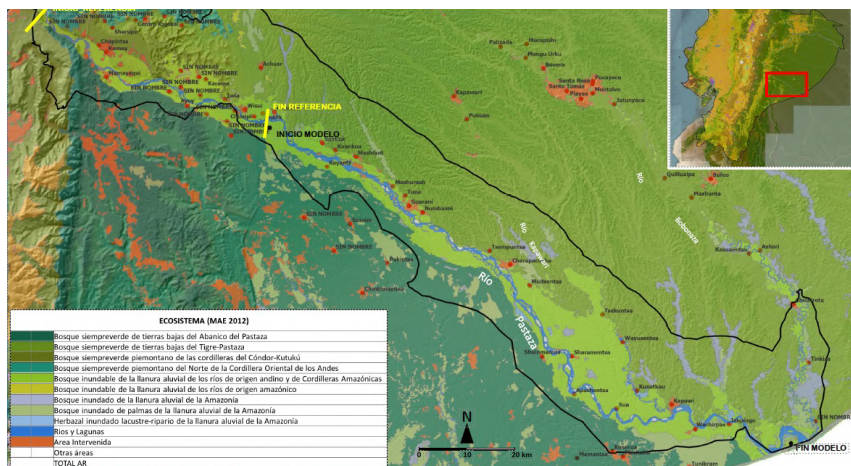
RIVERS, NOT ROADS: ELECTRIC RIVER TRANSPORT FOR A THRIVING AMAZON

1. The Challenge: Roads Are the Amazon's Hidden Threat

Transport infrastructure has historically been one of the main drivers of deforestation in the Amazon Basin, home to 400+ Indigenous nations and the planet's largest tropical forest. Each kilometer of road accelerates illegal logging and incursions into Indigenous territories. Studies show that nearly 95% of Amazon deforestation occurs within 5km of a road. Beyond tree loss, roads fragment critical ecosystems, bring extractive industries deeper into the forest, and threaten Indigenous autonomy.

A new study commissioned by IDB Invest and Kara Solar and produced by Fundación Paisajes Sostenibles shows that a potential new 138 km road in southeastern Ecuador could cause a minimum of 12,000 hectares of forest loss and 2,085,431 metric tons of CO₂ emissions over the next 30 years. The road's effect radiates up to one hour of travel time away, driving the clearing of forests to create new productive areas downstream from its terminus.

In less than 25 years, demand for transport in Latin America and the Caribbean, including the Amazon Rainforest, will double. How transport infrastructure is deployed in the Amazon is crucial to the future of the region and the planet.



2. The Alternative: Solar Rivers

Solar Rivers is an Indigenous-led model to scale clean transport and energy in the Amazon by replacing gasoline engines with solar-powered motors and community-managed charging hubs, which:

- **Redirects fuel** spending toward health, education, and food sovereignty while reducing the pressure to build roads
- **Strengthens bioeconomies** by providing clean transport and electricity for ecotourism, small-scale agriculture, and other sustainable enterprises
- **Builds territorial autonomy** through the training of local solar technicians and participatory infrastructure planning

With durable, repairable equipment manufactured near end users and a mature framework for local governance, risk allocation, alignment of incentives, and public-private collaboration, Solar Rivers is designed to enable scale. The first project, underway in Ecuador's Pastaza River basin, generates data and insights to inform future replication.



3. The Model: Mobility + Energy + Autonomy

Component	Description	Impact
Electric boats	Electric long-tail motors, built locally and designed for Amazonian conditions	Zero-emission transport for people and goods
Charging hubs and solar centers	Riverbank solar stations with portable battery storage	Electricity for community needs while powering mobility
Local solar technicians	Trained technicians repair and operate infrastructure	Local employment and clean energy autonomy
Indigenous governance	Cooperative model for infrastructure ownership and decision-making	Long-term ownership and cultural integrity

4. Proven Results:
From Ecuador to the Wider Amazon

In 2016, Kara Solar launched the first solar boat in the Amazon. Since then, the Indigenous-led organization has built a network of solar boats in Achuar territory, Ecuador, and partnered with communities in Peru, Brazil, Suriname, and the Solomon Islands to replicate the model.

- 12 solar boats deployed across the five countries
- 50+ Indigenous technicians trained in solar energy and maintenance
- 400+ km of navigable routes connected by solar boats.
- Each boat makes 175+ trips per year to health centers, schools, and markets, avoiding 6,500 gallons of gasoline and 52 tons of CO₂ annually just in Ecuador
- International recognition from The New York Times, Mongabay, The Guardian, CNN, BBC, Bloomberg, and more

5. Why This Matters for COP30

At this Amazon COP, there is a need for real Amazonian solutions. Solar Rivers offers a replicable framework for sustainable infrastructure that reduces emissions, prevents deforestation, and empowers Indigenous stewardship. It aligns with multilateral initiatives to preserve critical ecosystems and Indigenous land tenure in the Amazon.



6. Call to Action: Scale River-Based Solar Mobility

We invite governments, climate funds, philanthropy, and the private sector to:

- FINANCE** the expansion of Solar Rivers infrastructure as a direct, measurable alternative to road construction.
USD 15 million of blended capital, such as concessional capital, risk mitigation instruments, technical assistance, and results-based financing, will enable scaling of the initiative across 2,000 km of river corridors by 2030, deploying 1500 solar boats and 150 charging hubs, and preventing 20,000 hectares of deforestation.
- INTEGRATE** electric river mobility into National Development Plans (NDCs) and bioeconomy strategies as a proven Nature-Based Solution.
- REPLICATE** this model throughout the Amazon, creating a solar connectivity corridor that protects millions of hectares of primary forest.