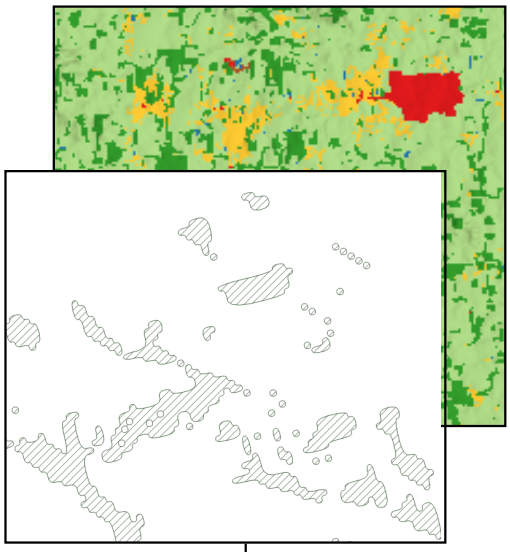
TerraLink - Optimizing wildlife habitat connectivity under real-world land and budget constraints

What TerraLink does

TerraLink analyzes fragmented patches of habitat, evaluates all possible corridor configurations, and selects the set that maximizes connectivity gains within the user's available budget and criteria.



User Inputs

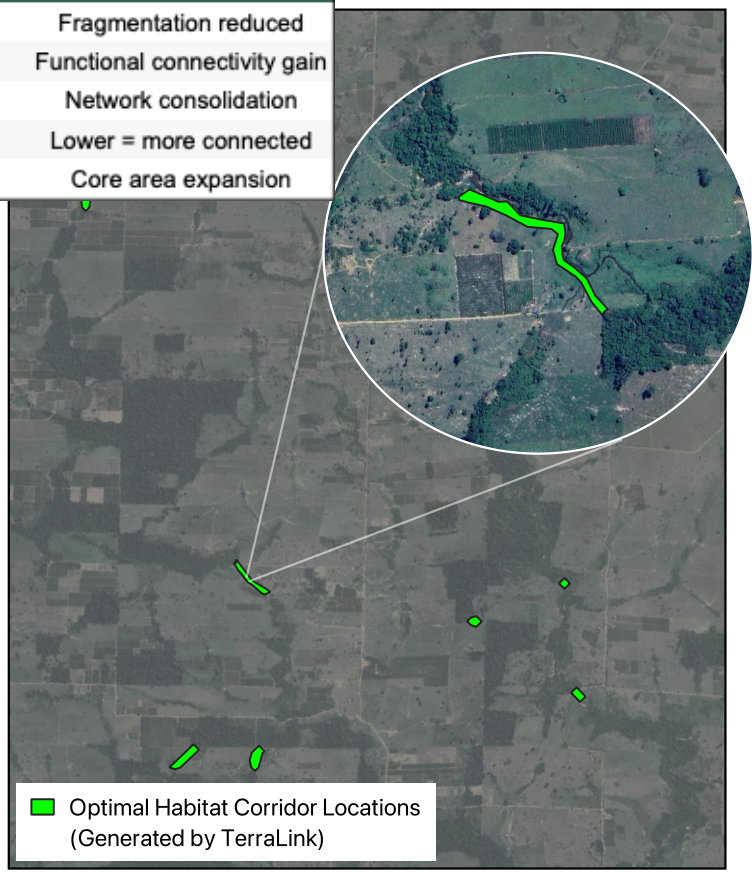
- Habitat spatial data (e.g.shapefile, LULC raster)
- Available corridor budget (acres/hectares)
- Minimum patch size to be analyzed (ha)
- Minimum corridor width needed for species of interest
- Impassable land types (e.g.urban,roads)

TerraLink Corridor Optimization (GIS plug-in)

Example Results

- Location: Southern Amazon Rainforest
- Forest Habitat Quality: Heavily fragmented
- Restoration Budget (user defined): 18 hectares
- Corridors Generated: 19

Landscape Metric	Baseline	Post-Process	% Change	Interpretation
Number of isolated patches	20	11	-45%	Fragmentation reduced
Effective MESH size (ha)	159.33	486.14	205%	Functional connectivity gain
Largest connected patch (ha)	300.19	883.29	194%	Network consolidation
Splitting index	15.24	5.1	-67%	Lower = more connected
Mean internal radius (m)	719.62	1060.84	47%	Core area expansion



Use Cases

- Landscape-scale restoration planning to prioritize corridors that reconnect fragmented habitats under fixed budgets.
- Project design and scenario comparison to test alternative layouts and maximize connectivity before implementation.
- Funding and decision support to justify corridor investments with defensible, spatially explicit analysis.

Download TerraLink

TerraLink GitHub repo
TerraLink Website repo

TerraLink v1.5 - Released January 30th 2026