Example No. 1 Modeling habitat connectivity for six bird species under different farm management in CATIE’s farm

Input:
- Land use map, indicator species, land use resistance, management scenarios

Output:
- A map showing potential dispersal paths for each bird species and under each management scenario.

Example No. 2 Modeling two of the most ecosystem services for the biological corridor: 1) soil erosion control and 2) habitat connectivity

Output:
- Maps indicating priority areas for enhancing connectivity, reducing erosion vulnerability and bundled services.

Example No. 3 Using the Integrated Valuation of Ecosystem Services and Tradeoffs (InVEST) and the Resources Investment Optimization System (RIOS) tools to identify cost-effective targeting strategies to provide the ES soil retention in the upper-middle Reventazon watershed.

Input:
- InVEST (Sediment retention model): land use, digital elevation model, soil erodibility, rainfall erosivity, cover management factor and watershed.
- RIOS (Erosion control): soil erosion control intervention options, implementation and maintenance cost, budget to implement activities, scenarios or targeting strategies.

Activities: Implement soil conservation practices

Scenarios or targeting strategies

RIOS

RIOS & Legislation
(Reinforce the use capability law
(Act N° 23214-MAG- MIRENEM, 1994)

RIOS & Erosive crops on steep slopes (observable criteria in the field)

InVEST determines the quantity or presence of an ecosystem service and its economic value; while RIOS identifies priority areas where changes on land management to protect or restore ecosystem services that are potentially more cost-effective.

The largest amount of reduced sediment is accomplished when targeting conservation efforts on erosive crops on steep slopes.

Investing on conservation practices targeted on erosive crops on steep slopes is cheaper than dredging the soil that would have been eroded.

Both tools were developed by the Natural Capital Project.