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# Effects of Water Funds Projects on Forest Loss and Water Quality in Ecuador and Brazil

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# Effects of Water Funds projects on forest loss and water quality in Ecuador and Brazil

6th biannual meeting  
EfD Forest Collaborative  
Manchester June, 2019

Allen Blackman  
Laura Villalobos

```
graph LR; A[Forest Conservation Policies] --> B[Forest Cover]; B --> C[Water quality]
```

Forest  
Conservation  
Policies

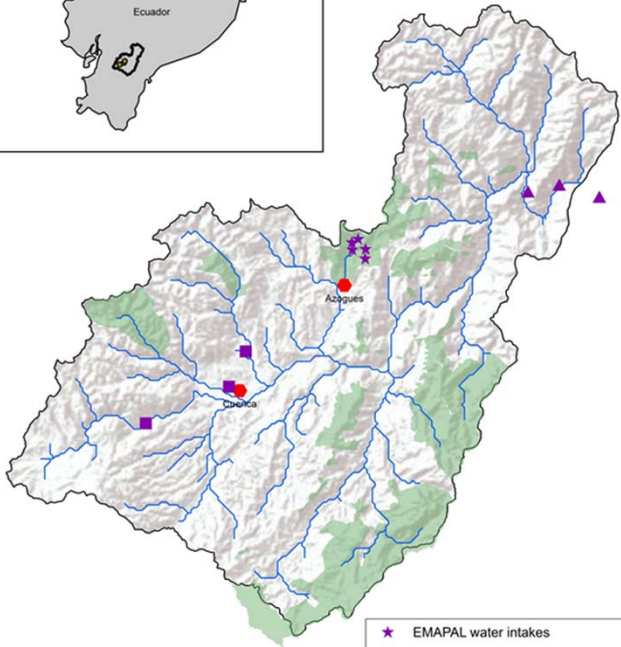
Forest Cover

Water  
quality

# Water Funds Projects

- Aim to conserve and/or restore forest NI in order to provide clean water to LAC cities
- Financial and technical support provided by Latin American Water Fund Partnership, an umbrella organization headed by TNC, IDB, FEMSA, GEF
- 2000: first project, FONAGUA, Quito
- Today: 16 Water Funds in operation, 24 being planning
- Interventions
  - Protection: increased enforcement patrols, fencing
  - Active and passive revegetation
  - Soil conservation on agricultural lands
  - Environmental education
  - Etc.

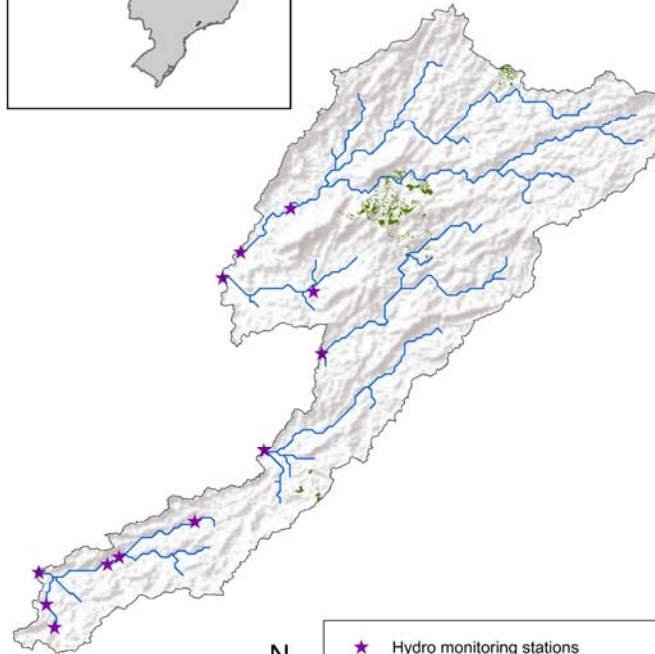
# Project sites



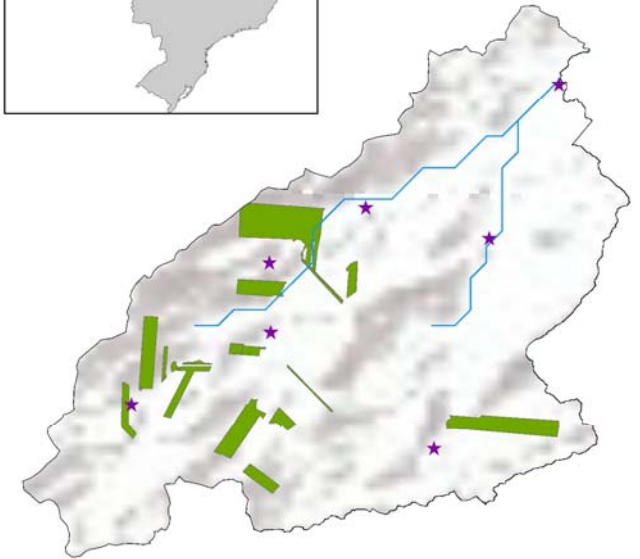
- ★ EMAPAL water intakes
- ETAPA water intakes
- ▲ Hydropower plants
- Main cities
- Rivers
- Areas of Implementing Activities (AIA)
- FONAPA



0 5 10 20 Kilometers



- ★ Hydro monitoring stations
- Rivers
- Areas of Implementing Activities (AIA)
- São Paulo Water Fund



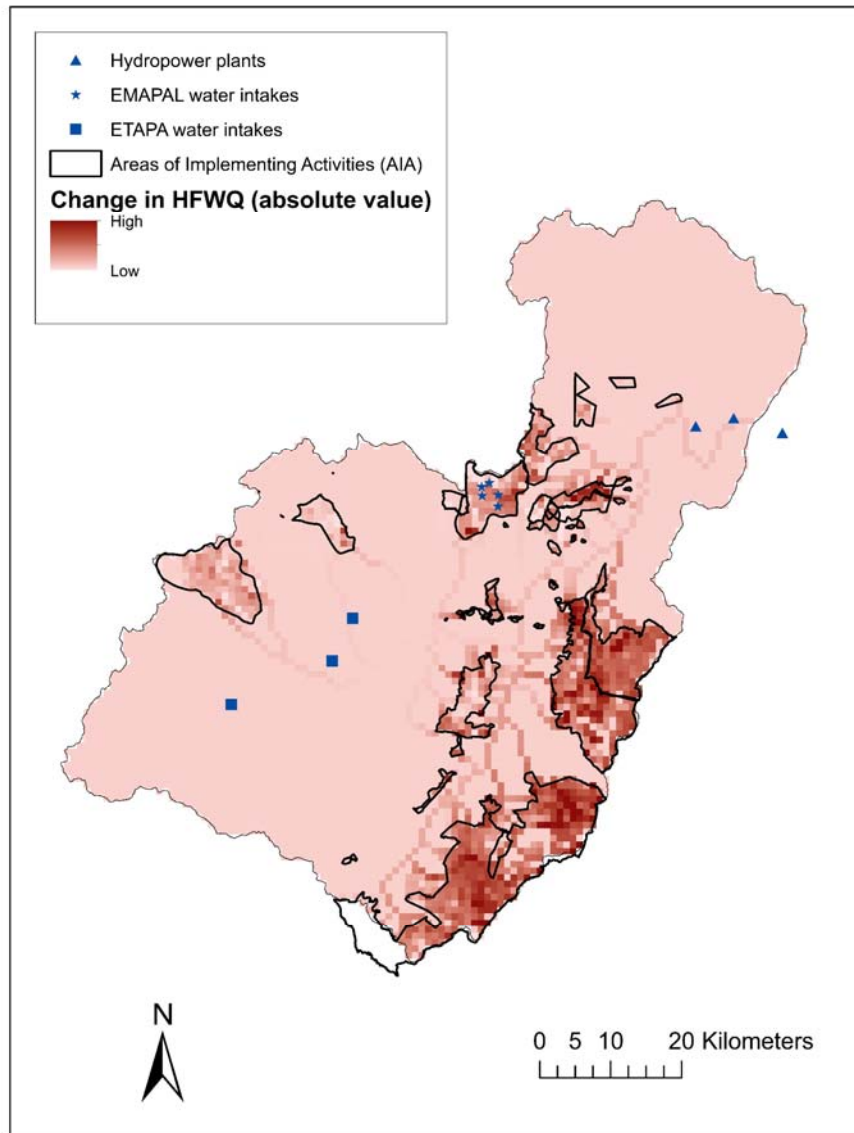
- ★ Random POI
- Rivers
- Camboriú\_AIA
- Camboriú Water Fund



## Preliminary Results

- Water funds are effective at preventing forest loss
- However, this avoided deforestation is not translated into substantially better water quality as measured by the hydrological model
- The benefits are much smaller than costs

	FONAPA	CAMBORIU	SAO PAULO
Annual reduction in forest loss below baseline rate (%)	9	13	7
Annual change in HFWQ (%)	0.18	0.005	0.000
Annual change in water utility total costs/WF admin costs (%)	5.67	0.58	0.00



## Explanations

- Conservation activities and water intakes don't overlap
- Baseline pollution levels are not severe
- We don't account for reforestation, paramo protection
- Our measure of benefits (saved costs) could be incomplete