**Table S1. Criteria for scoring qualitative variables related to human disturbance.** Variables were scored to the degree they deviated from minimally disturbed conditions (from 1 for no deviation, to 5 for highly degraded).

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| Variables | Criteria |
| Catchment |  |
|  Agriculture | < 10% agriculture and < 3% intensive farming (1) to > 50% agriculture or > 10% intensive farming (5) |
|  Urbanization | < 1% (1) to > 25% (5) urban  |
|  Forest and semi-natural | > 90% (1) to < 30% (5) natural land uses  |
|  *Eucalyptus* sp. monoculture | < 10% (1) to > 70% (5) *Eucalyptus* sp. monoculture  |
|  Burned area | < 10% (1) to > 70% (5) burned drainage area at least from five years ago |
| Segment |  |
|  Land use | < 10% nonnatural (1) to > 40% intensively cultivated land/intensive silviculture (5) |
|  Urbanization | < 1% (1) to > 25% (5) urban |
|  Riparian disturbance | no or minor impacts (1) to complete riparian vegetation removal (5) |
|  Morphological alteration | negligible (1) to complete channelization and bank hardening (5) |
|  Sediment load | < 5% of the bottom with fine sediments, and little turbidity (1) to > 75% of the bottom with fine sediments, or high turbidity (5) |
| Reach |  |
|  Alien fish abundance | no (1) to > 50% (5) aliens  |
|  Hydrological disturbance (dams upstream) | little (1) to extreme (5) deviation from the natural annual flow regime  |
|  Probability of invasion by alien lentic species (dams downstream) | very low (1) to high probability (5) of invasion by alien lentic species, as a function of the proximity and size of hydroelectric power plants downstream from the site  |
|  Nutrient & organic contamination | unpolluted (1) to extremely polluted (5)  |
|  Oxygen concentration | no (1) to extreme (5) deviation from the natural seasonal variation |