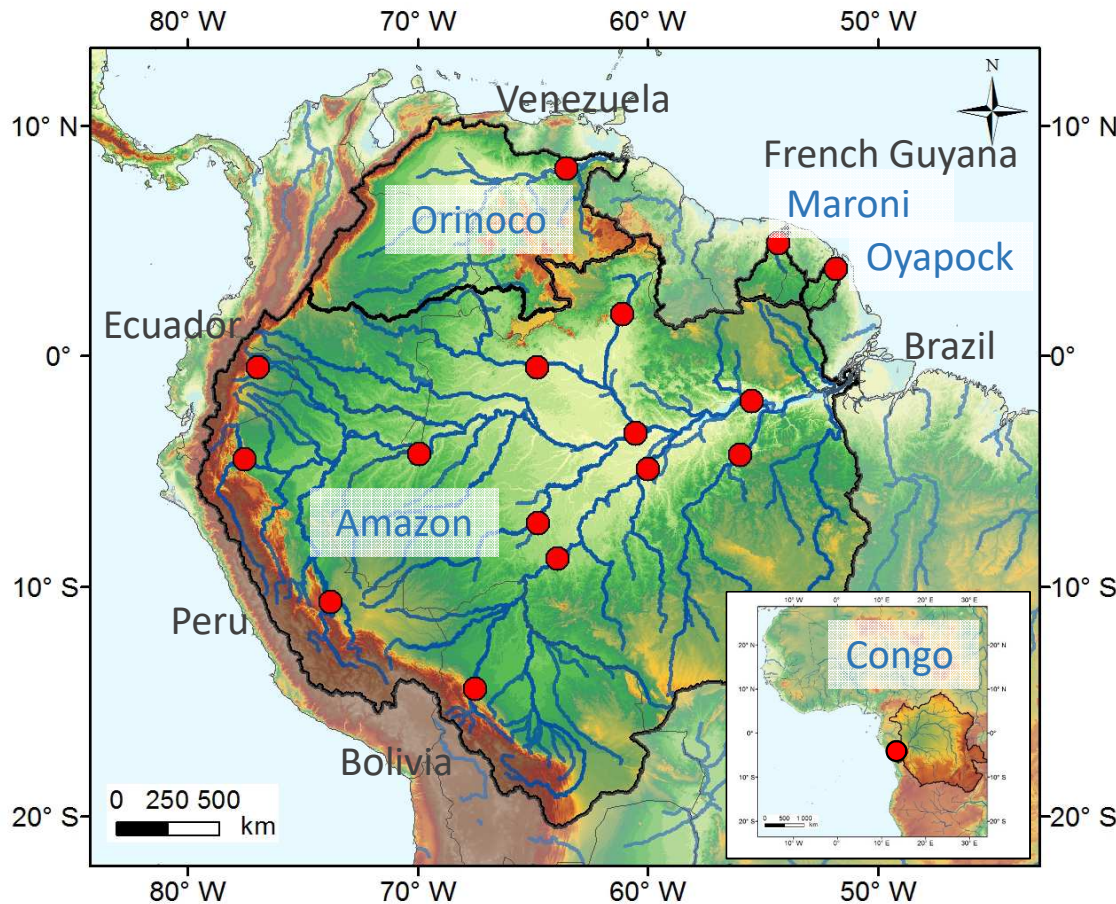




The HYBAM critical zone observatory of the Amazon basin

Geochemistry



17 stations / 8 countries / >40 institutions and universities

Data :

- daily water discharge
- 10 days frequency sampling suspended sediments
- monthly water geochemistry

Geochemistry parameters (GET-Toulouse and UFAM-Manaus):

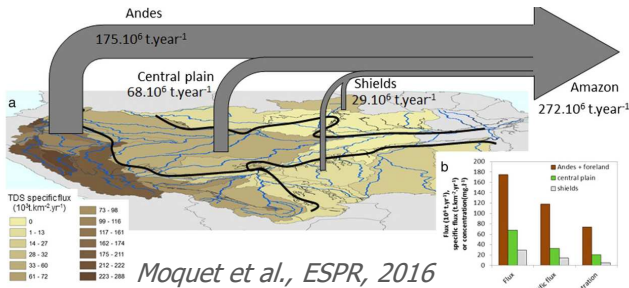
- pH and conductivity
- Major elements (Ca^{2+} , Mg^{2+} , K^+ , Na^+ , F^- , NO_3^- , SO_4^{2-} , Cl^- , alkalinity)
- Dissolved organic carbon
- Trace and Rare Earth elements
- $^{87}\text{Sr}/^{86}\text{Sr}$





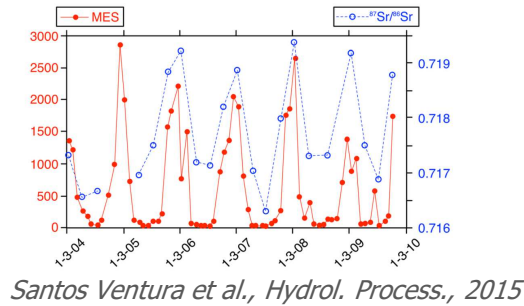
The HYBAM critical zone observatory of the Amazon basin Geochemistry

Dissolved load budget from the Andes to the Ocean



Fluxes to the oceans

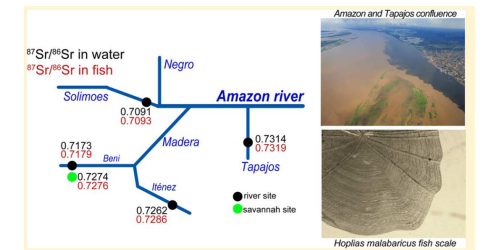
... the sediments-water interactions



Weathering processes

⁸⁷Sr/⁸⁶Sr as a powerful tracer of ...

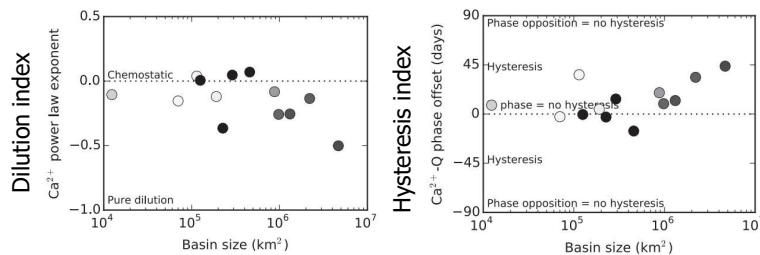
... Amazonian fishes trajectory



Ecology

- **>5000 samples** analyzed since 2003 (>100 000 geochemical parameter values)
- **data free available** : HYBAM website (www.so-hybam.org)

River mixing in the Amazon as a driver of C-Q relationships



Temporal variability

Environmental issues

Contamination of oil extraction activity at Amazon R. scale

