

# A high-resolution global SWATplus water quality model: Harmonizing local and global perspectives

2. River TN load (Gg/yr)

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# 1. Limited spatial and temporal water quality observations

Gauging the true extent of how polluted or impacted freshwaters are remains challenging globally simply due to limited spatial and temporal water quality observations.

To address this gap, we present a **high-resolution global water quality model** utilizing the Soil Water and Assessment Tool **(SWAT+)**. Our objectives are twofold:

- (1) To offer locally relevant water quality estimates on a global scale.
- (2) To understand how human activities and climate change are influencing the water quality of rivers.

### 3. Are regional patterns captured? (1990 - 2015)





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### Would YOU be interested in using the model?

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## 4. What next?

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Further model evaluation + reservoir management rules Areas around Aral sea e.g Indus basin not yet correctly captured Running future water quality patterns (ISIMIP fast track) Should be managed through a web portal, fully open?





