

Water resources in South America: sources and supply, pollutants and perspectives

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Abstract South America has the largest availability of water resources both per capita and per area. However, the continent also hosts some of the world's regions with the highest water scarcity. Compared to the attention to water quantity, water quality is a much more silent threat. It is increasing rapidly under the pressure of increasing urbanization and vigorous economic growth, especially in highly water demanding industries such as mining and agriculture. We review the major drivers of water quality deterioration in South America and the interaction with water availability. Despite its complexity, some geographical patterns can be identified, relating to the agricultural dominated southeast of the continent, the Andes in the west, and the Amazonian basin. Potential threats to water quality and aquatic ecosystem integrity are identified from both diffuse and point sources, originating from large-scale land-use conversion, intensification of agriculture, and expanding industrial activities such as mining and hydropower.

Key words South America; water quality; mining; agriculture; sediment