

## Impact of Coal Mining on River Sediment Quality in the Sydney Basin, Australia

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**Abstract :** The environmental impacts arising from mining activities affect the air, water, and soil quality. Impacts may result in unexpected and adverse environmental outcomes. This study reports on the impact of coal production on sediment in Sydney region of Australia. The sediment samples upstream and downstream from the discharge points from three mines were taken, and 80 parameters were tested. The results were assessed against sediment quality based on presence of metals. The study revealed the increment of metal content in the sediment downstream of the reference locations. In many cases, the sediment was above the Australia and New Zealand Environment Conservation Council and international sediment quality guidelines value (SQGV). The major outliers to the guidelines were nickel (Ni) and zinc (Zn).

**Keywords :** coal mine, environmental impact, produced water, sediment quality guidelines value (SQGV)

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