



Mining and Impact Assessment



Our Services

Hydrobiology provides services in developing and implementing baseline and impact assessment monitoring programs and environmental risk assessments relating to mining and infrastructure projects during development, operation, closure and post closure phases. Our team offers experience in marine and freshwater ecology, limnology, water and sediment chemistry, ecotoxicology, hydrology

Skills and Techniques

Hydrobiology offers a range of complimentary technical skills in freshwater and estuarine/marine flora and fauna ecology, water and sediment quality monitoring, animal tissue monitoring (biomonitoring) and ecotoxicity testing and developing and implementing risk assessment frameworks.

Hydrobiology has extensive experience in monitoring macroinvertebrates, fish, seagrass and coral communities as part of impact assessment, ecosystem health and habitat association studies. As part of carrying out these studies we rely on our knowledge of the biology and taxonomy of these flora and fauna, the ecological processes that maintain them and an understanding of how human activities of interest affect these processes. The result is that we provide scientifically robust study designs, underpinned by an appropriate choice of biological and physical parameters at appropriate spatial and temporal scales.

Our team has extensive knowledge of univariate and multivariate data analysis techniques, which allows us to address a wide range of resource management questions and to provide multiple lines of evidence to our clients. We also have the ability to use Aquarisk software to predict what proportion of species may be potentially at risk from exposure to particular concentrations of contaminants of interest.

Our key skills and applications include:

- Baseline monitoring and environmental impact assessment relating to freshwater and aquatic ecosystems;
- Characterisation and quantification of sediment loads and geomorphic changes;
- Surface water hydrology and environmental hydraulics;
- Geochemistry and limnology;

Applications

The main types of coasts and ports studies we undertake include:

- 1 Design and implementation of water quality, sediment quality and biological monitoring programmes;
- 2 Baseline and environmental impact assessment on aquatic environments
- 3 Erosion and sediment transport studies
- 4 Hydrology and water balance studies
- 5 Environmental and human health risk assessments



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