

Glossary

Bathymetry	describes water depth.
Benthic	describes the flora and fauna found on the bottom of the sea.
Biogenic	means produced by living organisms.
Biomass	is the total quantity or weight of organisms in a given area or volume.
Biota	refers the animal and plant life of a region.
Conductivity	estimates the total dissolved solids content in a water sample. Conductivity is used to indicate the presence of contaminants in water.
Endemic	refers to plants and animals, for example, which are found only in a certain region.
Eutrophication	means elevation of nutrient levels leading to excessive plant growth (including algae) in a marine or freshwater body. Subsequent decay of these plants can decrease dissolved oxygen levels, leading to death or stress of other aquatic organisms.
Fauna	is the animal life of a region.
Flora	is the plant life of a region.
Kaimoana	means seafood (includes fish and shellfish).
Macrofauna	refers to the larger organisms found, for example benthic macrofauna are the organisms found on the seabed normally classified as what is retained on a 0.5 to 1 mm sieve size.
Mahinga mataitai	means an area for gathering seafood.
Mana	means authority, prestige, dignity ⁸⁸ .
Mauri	means life energy principle; the vital energy force that gives being and form to all things in the universe; also provides the interconnection between humankind and the natural environment ⁸⁹ .
Meiofauna	refers to organisms smaller than macrofauna and which would typically be retained on a sieve size of 0.05 to 0.5 mm. Sieve size may differ slightly among reports, but meiofauna typically include organisms such as nematodes, copepods and larvae of macrofauna.
Pseudo faeces	material filtered from the water by mussels which is inedible and is expelled onto the seafloor. Expelled inedible material is referred to as pseudo faeces to distinguish it from true faeces of the animals, derived from edible ingested material.
Taonga	means item(s) that are greatly treasured and respected (includes natural resources) ⁹⁰ .
Taxa	refers to taxonomic groups for the purposes of classifying organisms.
Water quality indicators	refers to the following:

⁸⁸ Hauraki Maori Trust Board, June 1999, Hauraki Customary Indicators Report (Technical Paper No. 57: Maori), Ministry for the Environment

⁸⁹ *ibid*

⁹⁰ Margaret Mutu, 1994

Indicator ⁹¹	What does it tell us?
Dissolved oxygen saturation (DO %sat)	The higher the percentage of oxygen saturation, the greater the ability of the water body to support life. DO (%sat) levels of 40-60% are stressful to sensitive aquatic biota. If DO (%sat) remains low for an extended period of time, some organisms may die
Biochemical oxygen demand (BOD)	The amount of oxygen needed to break down organic matter in a particular volume of water. High BOD means that more organic matter is present, requiring greater volumes of oxygen for decomposition. This can result in a reduction in dissolved oxygen (see above).
Water clarity: measured using:	
Turbidity	Turbidity measures the extent to which particles (e.g. sediment, algae) suspended in water scatter light. When turbidity is high, water appears murky. High turbidity reduces the ability of plants to photosynthesise, makes it more difficult for fish to see their prey, and can adversely affect the gill structures of filter feeding animals.
Secchi disk depth	The depth at which a black and white disk (200mm) can be seen vertically through the water column. The greater the clarity of the water, the greater the Secchi disk depth.
Black disk transparency	A horizontal measure of water clarity. Measures the distance at which it becomes visible to an observer using an underwater viewer. It is an estimate of the distance that sighted animals can see horizontally under water.
Suspended solids (SS)	Measurement of the amount of suspended material in water (including plankton, clay, silt, organic material). Also called non-filterable residue (NFR). Suspended solids settle out as sediment, leading to problems such as estuarine infilling and smothering of biota.
Coliforms (or presumptive coliforms)	A group of bacteria which may be present in faecal material; however, only one (<i>E. coli</i>) is specific to faecal material. Many coliforms are found naturally in soil and decaying vegetation.
Faecal coliforms	These bacteria are more likely to indicate faecal contamination of water. However, again, some are naturally present in soil and decaying vegetation. The indicator therefore does not distinguish between human and non-human sources of faecal contamination.
Enterococci	Bacterial indicators which provide a better indicator of health risk than faecal coliforms. However, they are still not completely specific for human faecal contamination.
Nutrients	The nutrients nitrogen and phosphorus are essential for plant growth. However, elevated levels of these nutrients can lead to increased growth of algae, oxygen depletion and changes in marine community composition.
Ammonia	Ammonia is present in animal wastes and waste waters. In high concentrations, ammonia is toxic to many aquatic animals.
Nitrite	Nitrite is an intermediate compound produced during the breakdown of ammonia to the less toxic nitrate. It usually indicates the presence of a waste containing nitrogen. Nitrite is toxic, but less so than ammonia.
Nitrate	The end product of breakdown (oxidation) of ammonia by microbial decomposition. It is generally non-toxic to aquatic life. However, in higher concentrations (together with other nutrients) it can lead to the proliferation of aquatic plants and algae.
Dissolved inorganic nitrogen (DIN)	The sum of the concentrations of nitrate and ammonia.
Total Kjeldahl nitrogen	A measure of organic nitrogen and ammonia in a water sample. Organic nitrogen includes natural materials such as peptides, proteins and nucleic acids.
Total nitrogen	A combination of total Kjeldahl nitrogen, nitrate and nitrite. This represents all nitrogen that is biologically available in a water body.
Total phosphorus	A measure of all phosphorus present in a water sample.
Dissolved reactive phosphorus (DRP)	This is the portion of phosphorus dissolved in water, rather than adsorbed to sediment particles or present in organic matter. It represents biologically available phosphorus. Elevated levels of phosphorus (and other nutrients) can result in excessive growth of algae and other aquatic plants.
Chlorophyll <i>a</i>	A photosynthetic pigment present in all plants, including algae. Chlorophyll <i>a</i> can be used as an indicator of the amount of suspended plant matter, including algae, in a waterbody. High concentrations of algae can reduce water clarity, form surface scums, deplete oxygen in water and alter the colour of water. Some algal species can have toxic effects on aquatic life and human users of water bodies High chlorophyll <i>a</i> , together with elevated nitrogen and phosphorus, can indicate an overload of nutrients in a waterbody, and may represent algal blooms.

⁹¹ Water quality indicator definitions adapted from Wilcock and Stroud 2000 and ANZECC 2000