

Concentration vs Load



Wet Tropics
Major
Integrated
Project

Concentration is the amount of a substance in a volume of water (for example, milligrams per litre). We measure this with technical sensors or send a water sample to a laboratory for analysis.

Load is the weight of a substance moving down a waterway over a certain timeframe (for example, kilograms per year). To estimate load we need to know both the concentration of the substance in the water and the volume of the water moving down the stream over time.

Why is this important?

Runoff from all land uses affects the environment differently.

When we talk about toxic chemicals in the waterway we are concerned about the concentration of the chemical. This is because each toxic chemical will affect waterway health (eg fish and vegetation) at different concentrations.

In contrast to this, when we talk about nutrients in our waterways and in the GBR it is the **total load** that has a negative impact.



DIFFERENT CONCENTRATION, SAME LOAD

We put the same amount of coffee in each cup, because the mug has a larger volume, the coffee will not be as 'strong' as in the cup (concentration) but we have still consumed the same amount of coffee (load = 1 teaspoon).

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