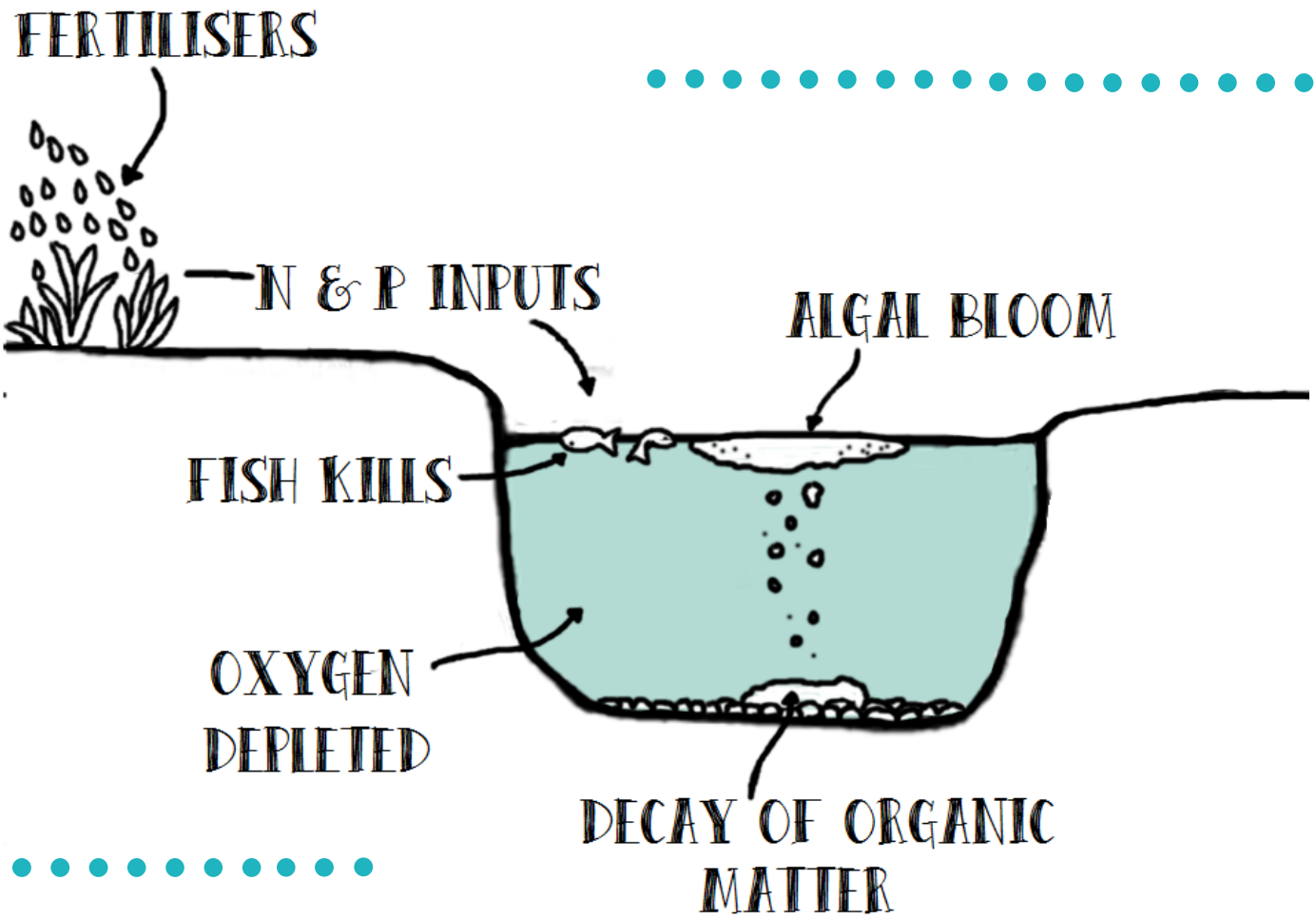
Eutrophication

Where does it come from?

Eutrophication is caused by increases in nutrients in water bodies. In the Westcountry a significant proportion of these derive from agriculture. The intensification of farming over the last century has driven a greater reliance on fertilisers and pesticides with severe impacts on our river ecosystems. Often large amounts of the fertilisers and pesticides used are not absorbed by crops and therefore end up being washed across the land and into the river when it rains. This can have severe effects on the river ecosystem since these chemicals are toxic for certain organisms and the large nutrient inputs can lead to eutrophication.

Nutrients in our rivers also come from domestic sources, such as misconnections in the sewage systems, septic tanks and the use of nutrient-rich cleaning products, as well as deriving from storm drainage and industrial wastes.



Impacts

Eutrophication occurs when nutrients (nitrates and phosphates) from fertilisers and organic matter (e.g. manure) enter the river. This excess of nutrients can lead to the excessive growth of algae, which outcompetes other species for resources. When the algae dies, it falls to the river bed where it is decomposed. As decomposers break down the organic matter, they use up the oxygen supply, potentially leading to fish kills. This effect is especially detrimental where eutrophication leads to the growth of 'harmful algal blooms', which, in high concentrations, appear as 'red tides'. Harmful algal blooms are those that are toxic and these toxins can concentrate through the food chain, causing illness or death to other species and, on occasion, to humans too.

Westcountry Rivers Trust