

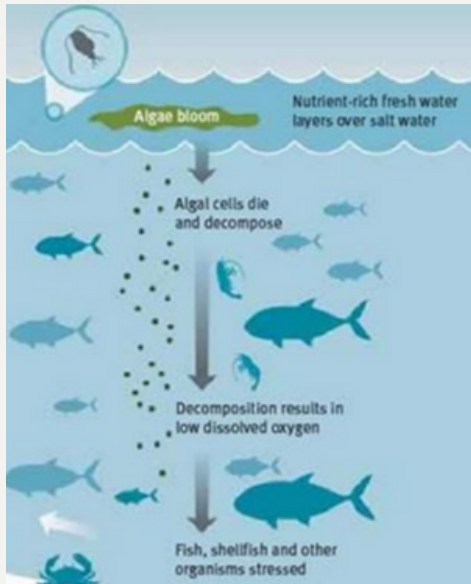
LAKE DEAD ZONES



Phosphorus runoff from agriculture has resulted in record rates of **algal blooms** in lakes that end up depleting the lake of oxygen and causing dead zones. By evaluating the **dissolved oxygen levels**, we can determine where to implement *regenerative agriculture and riparian buffers* to protect biodiversity and prevent future dead zones.

What are Dead Zones?

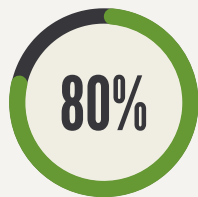
Dead zones are areas of lakes without aquatic or plant life due to the low levels of dissolved oxygen. Algal blooms are caused by an overload of nitrogen and phosphorus and causes bacteria growth. Bacteria use up the remaining oxygen to decompose leaving behind a dead zone.



So what?

400

dead zones worldwide. Once a lake is "dead" there is no bringing it back.



loss of freshwater species as a result of dead zones.

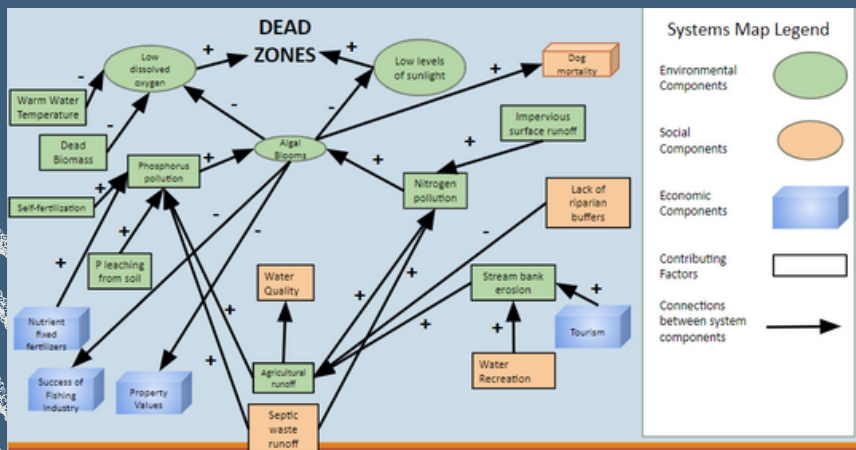
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as many freshwater species are declining as a result of dead zones compared to land and marine species

Systems Impact

The presence of **algal blooms** in lakes is the primary cause of the formation of dead zones, as this decreases dissolved oxygen and sunlight levels on the lake bottom.

Algal blooms are in turn promoted by nitrogen (N) and phosphorus (P) pollution caused by runoff from waste treatment plants and farms.



SOLUTIONS

ECONOMIC

Decline in fishing industries from Dead Zones negatively impacts communities that rely on the fishing industry for economic growth.

ECOLOGICAL

Wastewater and agricultural runoff cause the majority of nitrogen and phosphorus pollution in lakes.

SOCIAL

Recreation causes erosion of soils on lakes, which speeds up the growth of algal blooms.

1 Agricultural industry reducing fertilizer waste and implementing riparian buffers.

2 You can **personally** only water your garden, when necessary, maintain your septic tank, and purchase phosphate free soaps and detergents