

LIGHT POLLUTION AND ITS EFFECTS ON MARINE ECOSYSTEMS



What is ALAN?

(Artificial Light At Night)

Since the last century, we have artificially illuminated significant stretches of our coastlines. While this has allowed us to see what we are doing at night and gives us feelings of safety, introducing artificial lights can influence ecosystems in ways we are still trying to study and understand. You can explore some of these effects below.



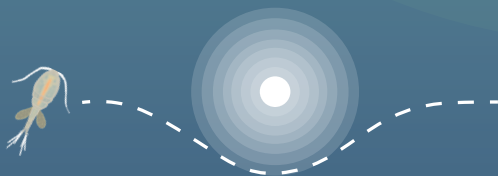
Like us, many organisms depend on the cycles of day and night. Though, unlike us, the majority of marine organisms are active at night. Artificially lighting surface waters at night can thus influence organism behaviours at sea. These interactions are complex and can locally shift food chains in marine and coastal areas.



The organisms here are **not** shown to scale.

Many marine organisms respond to changes in light in their environment. For instance, some predators can see their prey better in naturally or artificially lit waters, while prey may feel safer from predation in darker conditions. The presence or absence of light can therefore influence how easily certain organisms are eaten or how easily they access food.

Light fields



Many types of organism stay at specific light levels and therefore certain depths in the water - their position can tell us about the levels of light pollution under water.

This can be a useful parameter for researchers when they are studying the influence of artificial light on marine and coastal ecosystems.

The purpose of ALANIS

There is a greater need to understand ecosystem responses to artificial light at night. As such, both ALANIS and its sister project ISOLUME aim at uncovering effects on marine life from light pollution in European Seas.

This is critical in order to balance economic activities at sea and the well-being of our marine and coastal ecosystems.

This knowledge can feed into policies, legislation and practical measures.

