



## Causes of *Pelagia noctiluca* Outbreak in M'Diq Beach, Northwest Moroccan Mediterranean Coastline

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**Abstract:** The M'Diq beach has seen a successive outbreak's of *Pelagia noctiluca* starting in 2011. During the summer season, which is also known as the blooming and stranding's jellyfish season has severe impacts on regional activities. For this reason, this research aimed at documenting the mean causes of *P. noctiluca* outbreaks on our coastline. As a result, the simple linear tests shows that *P. noctiluca* outbreaks have a very significant linear relationship and are positively correlated to sea surface temperature with  $P=0.0079$  with  $y=3.5254x-59.616$ ,  $R^2=0.2062$ , sea salinity  $P=0.0029$  with  $y=14.741x-507.54$ ,  $R^2=0.2517$  and waves high  $P=0.000000002$  with  $y=20.473x-4.4583$ ,  $R^2=0.6893$ . Moreover, the blooms of jellyfish along with the production of Pelagic fish and whitefish were respectively and share a strong correlation with  $P=0.000001936$ , with  $y=-0.0079x+40.881$ ,  $R^2=0.5063$  for Pelagic fish and  $y=-0.0323x+55.431$ ,  $R^2=0.3008$  for whitefish production.

**Keywords:** *Pelagia noctiluca*, Jelly fish, Blooms, Fisheries productions, Moroccan Mediterranean northwest coastline

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