

# Jellyfish

[Science](#), [Physics](#)



Topic: The articles presented for this discussion, Jellyfish on the Rise, have a central focus on the apparent global increase in the abundance of jellyfish and/or outbreaks of jellyfish blooms. According to the study “ Increasing jellyfish populations: Trends in Large Marine Ecosystems” authored here at UBC (Brotz, 2012), it was claimed with the help of anecdotal evidence that the number of this species is increasing rather too rapidly but this article lacked a lot of facts due to lack of quantitative time series data. This study concludes via scientific and non-conventional information combined with the analytical framework of fuzzy logic that increasing trends of jellyfish abundance were identified to be 62% of the Large Marine Ecosystems (LME). Management and adaptation strategies seen to the logical expansion to these articles. However, as with the limited research available on the number of jellyfish, the limited research on management focuses upon human interactions with jellyfish in a way to compensate for the lack of evidence and data. Most management of jellyfish populations is done in context with the fisheries, power generation and tourism industries and management in relationship to their impacts on ecosystems and vital food webs. This is obviously due to their great socio-economic impact hence it is more likely to be funded or pursued. ‘ The jellyfish joyride: Causes, Consequences and Management response to a more gelatinous future’ by Richardson et al in 2009 provides a thorough table of management responses from the perspective of both ecosystem and human impacts but it is a brief outline. The recent book ‘ Jellyfish Blooms’ devotes an entire chapter to management from a human interaction standpoint. Options presented in the book include: 1) prediction of impending jellyfish blooms via ‘ early warning systems’ and

appropriate countermeasures before outbursts; 2) Jellyfish Excluder for Towed fishing gear (see Figure 6. 3); 3) physical and behavioral screens and barriers; 4) education of when it's safe to swim to reduce encounters with jellyfish; and 5) modeling programs that predict the distribution of jellyfish so effective forecasts and warning systems can be put in place.

Noteworthy is that both the articles and the research have a predominance of negativity toward jellyfish which cannot be denied. With synanthropic nature (Purcell, 2007) of jellyfish benefiting from human stressors including fishing, eutrophication and possibly global warming, these fierce ancient competitors pose viable, large scale alteration of pelagic ecosystems as they push our current diatom and large phytoplankton dominated primary producers back to the Cambrian which was dominated by cyanobacteria and flagellates (Richardson, 2009). However, there are positive attributes to jellyfish too. Besides their role in the food web, jellyfish are involved in climate regulation, disease and pest regulation, provision of a viable food source for humans and most importantly the development of the green fluorescent protein (GFP).

More research is called not only to determine the numbers of jellyfish, their effects on ecosystems and effective management techniques but, concurrent research on the human benefits of jellyfish and possible uses which can hopefully provide alternative management processes. After all, there is the possibility of one day uttering " Eat your jellyfish" at the dinner table (Weiss, 2006).

Sources: