

DEALING WITH JELLYFISH

INTRODUCTION

Jellyfish blooms have become, in past decades, a huge issue in leisure and tourist activities in the Mediterranean coast. Although it's stings aren't a health hazard, they are a nuisance and can be responsible for 3% to 10,5% of the decrease in tourism in areas that are not able to deal with them.

Because of that, it seems essential to find out an **effective management method** to handle the jellyfish blooms and the best way to **decrease its impact** in the tertiary sector during the summer months.

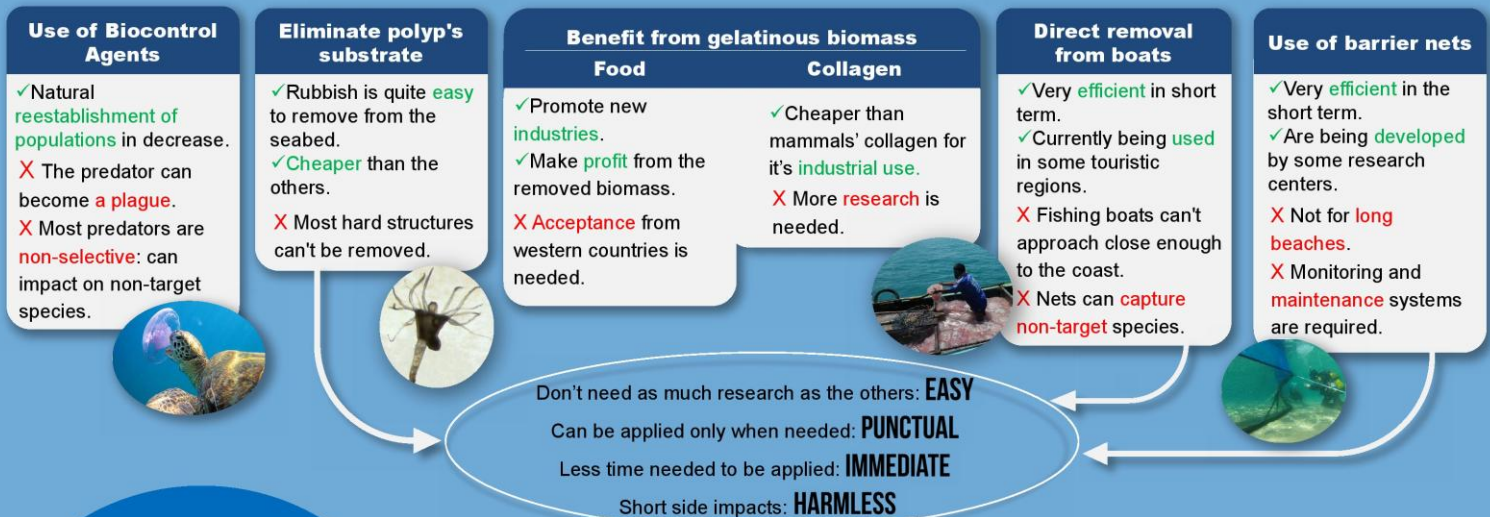
This study is focused on the most common species: *Aurelia aurita*, *Rhizostoma pulmo*, *Pelagia noctiluca* and *Cotylorhiza tuberculata* in the Spanish Mediterranean coast.



OBJECTIVES

- ✓ To analyze the **viability and effectiveness** of FAO's jellyfish management's proposals.
- ✓ To **determine the real need**, in the Mediterranean coast, of investment in jellyfish blooms management measures.

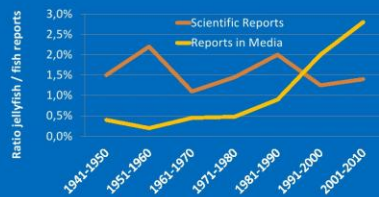
BENEFITS AND ISSUES OF EACH MANAGEMENT PROPOSAL



DO WE REALLY NEED TO ACT ON JELLYFISH BLOOMS?

- **Observational efforts** in marine ecosystems (scientific and casual public observations) are **increasing** exponentially, which provides more opportunities to report jellyfish aggregations.
- Jellyfish behavior is to keep in **aggregates**, but observed ones could not be representative of all regions' population.

Figure 1: Number of jellyfish reports divided by the number of fish reports in media (Google News) and Web of Science, per decades (Adaptation of Condon R et al, 2012).



3. The **lack of long-term data** is the major impediment to detect trends in jellyfish populations. This results in a **wrong frame of reference**, which refers only to the immediate past and ignores reports of blooms in the more distant past.

4. **More scientific research is needed** in order to know jellyfish's temporal and spatial dynamics and the role of human impacts on that. It's known that overfishing and eutrophication contribute to the increase of jellyfish populations. Therefore, maybe the **best measure is curative**, not preventive: minimizing human impacts would lead to the reestablishment, not only of jellyfish populations, but of the complete ecosystem in long term.

CONCLUSION

The **best management methods** are the removal from boats and barrier nets due to its immediate application and effectiveness, and its short side impacts. This should be combined with the collection of rubbish in the seabed, that would have other ecosystem benefits.

The investment must be focused on:

- **Minimizing human impacts** on the ecosystem that would equilibrate the environment.
- **Scientific research**, to determine the dynamics, causes and consequences of jellyfish blooms and if there's a real increase in their populations.

We should act on jellyfish blooms only as a curative and punctual management.

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