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## ***Interactive comment on “Wind forcing and fate of *Sardinella aurita* eggs and larvae in the Sicily Channel (Mediterranean Sea)” by M. Torri et al.***

### **Anonymous Referee #2**

Received and published: 9 November 2015

The paper describes an attempt to relate the distribution of eggs and larvae of *Sardinella aurita* to the hydrodynamics in the Sicily Channel.

Figure 1 is possibly misleading because the dots showing the location of the sampling stations can be confused with the dots showing the abundance of larvae. Also, the distribution appears very patchy, with concentrations at neighboring locations having little in common. Therefore, the real distribution is clearly undersampled and possibly gives a biased view of the real distributions. To gain confidence in the experimental data, more should be said about the total volume of water filtered at the different stations.

Very little is said about the actual lagrangian method and the numerical set-up. Section

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2.3 gives general comments, references but does not provide any information about the real method used in this study. More information is required :

- Which method(s) ?
- Which velocity field (origin, spatial resolution, temporal resolution) ?
- Buoyancy of the particles ?
- Seeding strategy ?
- Timespan of the simulation ?
- ...

Also, the strong statements made at lines 11-14 about the issues related to lagrangian techniques should be substantiated with appropriate references or omitted.

Please explain the sentence "This indicates that *Sardinella aurita* larvae did not find the ideal dynamics conditions (where ?) for a local recruiting and were delivered offshore" Please also clarify the scenario described on page 2105 (lines 8-13). Obviously, eggs are hatched near Capo Passero. Then, I do not understand how a coastal upwelling can induce a current transporting the eggs along the Sicilian coast and mix (? - current do not mix water masses) these eggs with in situ (where ?) spawning eggs when no eggs are found along the coast... Also why would only larvae larger than 8 mm be advected by the cold filament ?

Figure 3 and 4 do not support the idea of a transport of eggs/larvae from Capo Passero region to the western part of Malta : the main stream flows eastward of Malta. The arrow on figure 3 does not reflect the results of the Lagrangian simulation. It is therefore misleading.

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Figure 5 shows rather different Chl-a content in 2010 and 2011. Therefore, one cannot rule out the fact that the different distributions of *Sardinella aurita* might be due to different temperature conditions (a corrected figure 5c would help) and food web dynamics rather than the occurrence or not of cold filaments transporting eggs and larvae offshore.

The presentation of the paper should be drastically improved : words are missing at many places, the language must be improved (the manuscript should be checked for the English) , figure 5 C is identical to figure 5 A...

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Interactive comment on Ocean Sci. Discuss., 12, 2097, 2015.

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