Brisbane, on the 3rd June 2015

Dear editor of the Journal of Agricultural, Biological, and Environmental Statistics,

We are writing to your journal to submit for publication, as a full paper, a manuscript entitled **Hazard function models to estimate mortality rates affecting fish populations with application to the sea mullet (*Mugil cephalus*) fishery on the Queensland coast (Australia)** that has not been published or simultaneously submitted for publication elsewhere. This article describes a novel method to create likelihood functions of age data collected from fisheries catch. This work was motivated by the necessity to develop methods to process a large number of datasets collected by the long-term monitoring program of the government of Queensland (Australia). The method development originated in 2002 from the realization of the existence of the statistical counterpart to the exponential model. This approach was refined over the years by successive discussions with statisticians in Europe and Australia and fully matured by embracing the body of research generated by survival analysis.

Applying survival analysis concepts and methods to age data collected in fisheries research has open a new way to look at an old problem. It allowed to estimate natural mortality for sea mullet, a parameter we thought previously was not possible to estimate due to lack of information. This new method has improved our efficiency of processing age datasets. We believe that this application could be a burgeoning field of application of survival analysis to fisheries research.

In our opinion, the best researchers to review this paper would have a background in applied statistics, in particular survival analysis. Our colleagues working in this area for medical research who have read a copy of the manuscript have had no problem with the concepts of applying survival analysis to fisheries age data.

We provided a companion library written in R, called Survival Analysis For R (SAFR), with this manuscript to demonstrate the use of concepts presented as well as providing an implementation of survival analysis methods for fisheries research. Our testing of this library found that the *optim* routine in R did not work on our 32-bit machines while it performed according to expectations on 64-bit systems. This glitch is beyond our control and we are awaiting a fix. Until then, we recommend you and your reviewers to run the examples from the SAFR library on 64-bit machines.

We hope that you will find this work interesting and relevant to our scientific community.

Regards