

**Sujet: MariFish WP7-Mediterranean – Workshop on Ecosystem modelling**  
**From Konstantinos Tsagarakis - [kontsag@her.hcmr.gr](mailto:kontsag@her.hcmr.gr)**  
**Tue, 05 May 2009**

Dear MariFish WP7-Mediterranean colleagues,

My e-mail concerns the organization of the workshop on ecosystem modelling techniques currently used in ecosystem approach to fisheries management, that we have discussed during the last MariFish meeting in Corsica. I apologize for the delay of my e-mail but I wanted to do some reading and contact few people to get informed on different modelling techniques, since I was familiar only with Ecopath/Ecosim.

The most interesting models which take into account the majority of the food web components and are currently being used in fisheries science, seem to be Ecopath with Ecosim, Osmose and Atlantis. Several other modelling techniques have been developed but they don't take into account the whole ecosystem or are less applied in fisheries: e.g. ERSEM usually models the lower trophic levels (up to the zooplankton level) or when applied to higher trophic level groups, the resolution is poor, while MultiSpeciesVPA usually focuses only on a few fish species.

During the meeting we didn't fully clarify the aim and subject of the workshop. In my view, there are three possibilities. To organize:

(1) *a workshop in order to compare different models that have already been applied in the Mediterranean sea.*

As far as I know though, only ecopath has been applied in the Mediterranean. In this case we could compare all similar ecosystems (e.g. lagoons, continental shelves, littoral etc). Given the fact though that Italy does not participate in MariFish (yet?) we will probably miss some models from Italian ecosystems (e.g. Venice lagoon). I'm also aware of some (preliminary?) work using MSVPA for hake and anchovy, done for NW Mediterranean. MSVPA and ecopath do not have the same output and are addressed to answer different questions, and therefore I am not sure if a comparison on simulation results between the two techniques makes sense.

(2) *a workshop for experts to discuss and compare the different techniques and possibly apply them in one or two ecosystems which will serve as case studies.*

Building additional models for ecosystems where an ecopath model already exists, is quite impossible to be done until the workshop: Atlantis model is a very data demanding model and according to Dr Fulton, who originally built the model, it is not user friendly, requires special modelling skills and someone should be trained in order to apply it. More or less, this is also the case for Osmose. We could alternatively try to use as case studies ecosystems other than the Mediterranean (e.g. Benguela where osmose and ecopath have been applied) but this relies on the good will and availability of people who have applied the models, and I'm not sure if this is within the scope of MariFish Mediterranean WP7.

(3) *a seminar for people involved with modelling, in order to get familiar with more modelling techniques.*

In this case we need to have some experts for each model (e.g. Ecopath, Osmose, Atlantis) that we would like to focus on. In this case, I should mention that we might have to invite people from non MariFish countries.

I would like to hear your suggestions and comments.

Depending on what we decide, I will do some research in order to provide Cristobal with contact information of experts and some people that are possibly interested to participate in the workshop, so that he can contact them in a more official way, as we have agreed in the meeting.

Thank you very much for your time,

Konstantinos Tsagarakis,  
Hellenic Centre for Marine Research,  
Institute of Marine Biological Resources  
Heraklion, Crete  
Greece  
tel: +30 2810 337831, fax: +30 2810 337822  
alt e-mail: [kontsag@gmail.com](mailto:kontsag@gmail.com)

P.S. A workshop of experts aiming at the comparison and discussion of different modelling techniques was held in Canada in 2007.

Whoever interested can find the report in the following address:

[http://www.dfo-mpo.gc.ca/CSAS/Csas/Publications/Pro-CR/2008/2008\\_007\\_B.pdf](http://www.dfo-mpo.gc.ca/CSAS/Csas/Publications/Pro-CR/2008/2008_007_B.pdf)