



## Innovation Forum “From Policy to Solutions”

# A novel Welfare Assessment tool for Sea-Caged European Sea Bass: the SWIM (Salmon Welfare Index Model) approach

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# KNOWLEDGE NEED

Although welfare is considered as an important element of a sustainable aquaculture industry, currently, there is no gold standard for fish welfare assessment.

## WHY?

- ✓ The assessment of fish welfare in various aquaculture conditions is challenging.
- ✓ It is hard to turn the available qualitative information of welfare status into quantitative data.



Fish cannot speak and has no facial expression...  
How can we know if their welfare is good or bad?



This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No. 871108 (AQUAEXCEL3.0). This output reflects only the author's view and the European Commission cannot be held responsible for any use that may be made of the information contained therein.



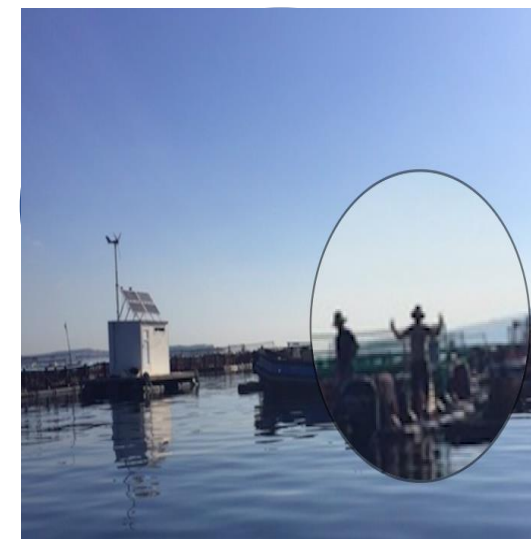
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# SOLUTION (RESULT)

We applied a model to assess the welfare status of European sea bass (*Dicentrarchus labrax*) in Mediterranean aquaculture, in a quantitative way.

- ✓ Based on one of the **most technically convenient fish welfare assessment methods**, the Salmon Welfare Index Model (SWIM) 1.0 – with some adaptations
- ✓ Model is functional to evaluate the welfare level of European **sea bass in on-farm conditions**
- ✓ This study is the **first to benchmark** overall sea bass welfare in sea cages



**TRL level = 8**, it is not yet fully operational at farm level as it needs some further testing and refinement, and subsequent conversion into a commercial tool

# TARGET MARKET



## System and tool companies

Advanced technology and precision aquaculture companies

Develop further into a practical, commercial tool that can be applied at farm level:

- mobile phone app
- model digitalization
- early warning tool

## Potential End Users

Fish health specialists and/or farm managers

Mediterranean sea bass producers (>200,000 tonnes)

## Potential Applications

Implement at farm-level to regularly monitor fish welfare



# IMPACT

Positive public  
perception

Increased proficiency

Business resilience

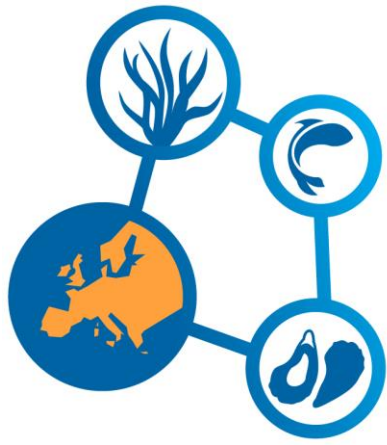
Healthy fish

Sustainable environment

Improved food safety  
standards

Preservation of local  
ecosystems





# AQUA EXCEL 3.0

AQUAculture infrastructures  
for EXCELlence in European  
fish research 3.0



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# Thank you!

If you are interested to invest/collaborate towards the further development of this OUTPUT lets talk about afterwards OR write to me: [yavuzcan@ankara.edu.tr](mailto:yavuzcan@ankara.edu.tr)  
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