

BlueBRIDGE - Task #7043

Project WP # 654 (Closed): WP6 - Supporting Blue Economy: VREs Development [Months: 1-30]

Project Task # 655 (Closed): T6.1 Performance evaluation, benchmarking and decision making in aquaculture VRE [Months: 1-30]

Define environmental factors that affect aquaculture performance

Feb 10, 2017 09:21 AM - Dimitris Katris

Status:	Closed	Start date:	Feb 10, 2017
Priority:	Normal	Due date:	
Assignee:	Gerasimos Antzoulatos	% Done:	100%
Category:		Estimated time:	0.00 hour
Sprint:	WP06		
Infrastructure:	Development		

Description

Can you please provide a list of environmental factors that could affect aquaculture performance. These factors will be used in order to determine similarity between areas.

This can be an ongoing process but we would like to have some initial results in the near future so as to start searching for geospatial data corresponding to these factors.

History

#1 - Feb 16, 2017 06:48 PM - Gerasimos Antzoulatos

- % Done changed from 0 to 20

- Status changed from New to In Progress

- File *Effects of temperature on growth and metabolism in a Mediterranean population of European sea bass, Dicentrarchus labrax J. Person-Le Ruyet 2004 j.aquaculture 237.2004.04.021.pdf* added

- File *Effects of temperature and body weight on growth rate and feed conversion ratio in turbot.pdf* added

- File *The interaction of temperature and salinity on growth and food conversion in juvenile turbot.pdf* added

- File *The Effects of Salinity, Temperature and Feed Ratio on Growth Performance of European Sea Bass.pdf* added

- File *The effect of temperature and fish size on growth, feed intake, food conversion efficiency and stomach evacuation rate of Atlantic salmon post-smolts.pdf* added

- File *EFFECTS OF SALINITY AND TEMPERATURE ON THE GROWTH, SURVIVAL, WHOLE Body.pdf* added

According to the literature the environmental factors that affect the fish growth and the productivity in aquaculture among the others are:

- Water Temperature
- Salinity
- Oxygen
- Currents

The following list contains scientific/research works regarding to this topic:

- Dowling, D. C., & Wiley, M. J. (1986). The effect of Dissolved Oxygen, Temperature and Low Stream Flow on Fishes: A Literature Review. Illinois Natural History Survey.
- Ercan, E., Ağralı, N., & Tarkan, A. (2015). The Effects of Salinity, Temperature and Feed Ratio on Growth Performance of European Sea Bass (*Dicentrarchus labrax* L., 1758) in the Water Obtained Through Reverse Osmosis System and a Natural River. Zoological Society of Pakistan, 625-633.
- Handeland, S. O., Imsland, A. K., & Stefansson, S. O. (2008). The effect of temperature and fish size on growth, feed intake, food conversion efficiency and stomach evacuation rate of Atlantic salmon post-smolts. *Aquaculture*, 36-42.
- Imsland, A. K., Foss, A., Gunnarsson, S., Berntssen, M. H., FitzGerald, R., Bonga, S. W., et al. (2001). The interaction of temperature and salinity on growth and food conversion in juvenile turbot (*Scophthalmus maximus*). *Aquaculture*, 353-367.
- Mallya, Y. J. (2007). The effects of dissolved oxygen on fish growth in aquaculture. Ministry of Natural Resources and Tourism Tanzania, Kingolwira National Fish Farming Centre, Fisheries Division. UNU-Fisheries Training Programme: 16-17.
- Ostrowski, A. D. (2009). Effects Of Salinity And Temperature On The Growth, Survival, Whole Body Osmolality, Stress Resistance, And Mrna Expression Of Na⁺/K⁺ - Atpase In Red Porgy Larvae, *Pagrus Pagrus*. University of North Carolina Wilmington, Center for Marine Science.
- Person-Le Ruyet, J., Mahe, K., Le Bayon, N., & Le Delliou, H. (2004). Effects of temperature on growth and metabolism in a Mediterranean population of European sea bass, *Dicentrarchus labrax*. *Aquaculture*, 269-280.

#2 - Feb 17, 2017 04:04 PM - Gerasimos Antzoulatos

- File deleted (*EFFECTS OF SALINITY AND TEMPERATURE ON THE GROWTH, SURVIVAL, WHOLE Body.pdf*)

#3 - Feb 17, 2017 04:04 PM - Gerasimos Antzoulatos

- File deleted (*The Effects of Salinity, Temperature and Feed Ratio on Growth Performance of European Sea Bass.pdf*)

#4 - Feb 17, 2017 04:04 PM - Gerasimos Antzoulatos

- File deleted (*The interaction of temperature and salinity on growth and food conversion in juvenile turbot.pdf*)

#5 - Feb 17, 2017 04:04 PM - Gerasimos Antzoulatos

- File deleted (*The effect of temperature and fish size on growth, feed intake, food conversion efficiency and stomach evacuation rate of Atlantic salmon post-smolts.pdf*)

#6 - Feb 17, 2017 04:04 PM - Gerasimos Antzoulatos

- File deleted (*Effects of temperature and body weight on growth rate and feed conversion ratio in turbot.pdf*)

#7 - Feb 17, 2017 04:04 PM - Gerasimos Antzoulatos

- File deleted (*Effects of temperature on growth and metabolism in a Mediterranean population of European sea bass, Dicentrarchus labrax J. Person-Le Ruyet 2004 j.aquaculture 237.2004.04.021.pdf*)

#8 - Mar 01, 2017 12:03 PM - Gerasimos Antzoulatos

Useful link for environmental parameters: <http://www.fondriest.com/environmental-measurements/parameters/water-quality/dissolved-oxygen/#1>

Useful link for Currents: http://oceanservice.noaa.gov/education/tutorial_currents/welcome.html

#9 - Mar 07, 2018 09:10 PM - Gerasimos Antzoulatos

- % Done changed from 20 to 100

- Status changed from In Progress to Closed

- Infrastructure Development added