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## Applying data mining techniques to estimate FCR KPI in aquaculture: The AQUASMART project

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Although globally the aquaculture is one of the most rapid growing livestock production sector, however there are major challenges that have to be addressed concerning the improvement of the production, reducing the expenses, ensuring simultaneously the environment sustainability, the high quality food and animal welfare. The efficient confrontation of the aforementioned issues is the adoption innovative technologies which are capable to analyze and reveal potentially useful knowledge hidden in the accumulated data of aquaculture enterprises. The AquaSmart Horizon 2020 project bridges the gap between aquaculture sector and technological achievements in the field of Data Mining. This paper presents a use case demonstrating the conversion of data to actionable knowledge focusing in the problem of the evaluation of the feeding and the management of the fish. To address this multi-factor problem, aquacultures probe the behavior of FCR together with features such as SGR, SFR, the temperature, the production time etc in periodic datasets from sampling to sampling. The aim is to provide to fish farmers a reliable system that is able to recommend and also interpret the expected and unexpected behaviors of the fish batches during their growth. Specifically, on one hand the system provides to aquafarmer an automated suggestion of which batches or units exhibit unexpected FCR value comparing with the estimated by the model FCR value, so as to take further corrections. On the other hand, by considering and quantifying the interaction between all the relevant factors affecting the production process, we can investigate how the FCR can inform and enhance the production management process.

### Biography

Stavros Platsis is the Sales & Marketing Director of aquaManager Aquaculture Software. He graduated from the American College of Greece with a degree in Marketing and B.A. He established three successful firms in the fields of Advertising and Marketing, Film Music Industry and International Trade. He was one of the first to analyze and support the commercialization of Stevia as a natural sugar substitute in the Greek market with three design awarded innovations. He entered the aquaculture industry next to his mentor Mr Kostas Seferis in order to assist the penetration of smart information systems, like aquamanager aquaculture software, toward a more environmentally friendly, more efficient and better controlled production all over the world.

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### Notes: