

ONLINE TRAINING PROGRAMME

THREE WORKSHOPS:

1. SKELETAL MALFORMATION
2. HISTOLOGY AS A GO-TO FOR HATCHERY-FISH WELFARE
3. EGG AND LARVAL PROGRAMMING AS A TOOL TO MANIPULATE AQUACULTURE PERFORMANCE

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As part of its capacity building activity, PerformFISH has designed a training programme on the latest understanding of juvenile quality and growth potential in seabream and seabass production. This programme will be held online on and broken into three separate workshops on July 7th, 13th and 15th. The course will be based on a multidisciplinary integrated approach that will translate the outcomes of the PerformFISH project into actionable opportunities for the fin-fish aquaculture industry.

The three workshops being offered are distinct from one another, so attendees may apply to attend as many or few of them as they like. All are free to attend and delivered in English.

The workshops on skeletal malformations and histology as a go-to for hatchery-fish welfare will be run as small, interactive meetings. These workshops will therefore have limited spaces available for registrants.

The workshop on egg and larval programming as a tool to manipulate aquaculture performance will be run as a webinar and have no limit on number of attendees.

To apply for one or more of these workshops, please go to this [form](#).

Workshop 1: Skeletal Malformations

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| Description | Whole mount staining of fish larvae at the hatchery stage can provide insight into the incidence and frequency of different malformations. This can serve as a management tool to estimate quality and the effect of interventions during hatchery management. |
| Dates | 7th July 2022 |
| Organiser | Giorgos Koumoundouros, (University of Crete, Greece) |
| Subjects | Skeletal abnormalities in commercial marine finfish hatcheries. Any news? - Old news, bad news, good news. (Duration 1-1.5h) Quality control on larval samples. Quantifying the severity of caudal-fin abnormalities (Duration 0.5-1.0 h) |
| Target Audience | <ul style="list-style-type: none"> Hatchery managers Quality-control personnel |
| Language | English |

Workshop 2: Histology is a go-to for hatchery-fish welfare

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| Description | Fish histology is a study approach largely exploited in many fields so like in aquaculture histological surveys to evaluate the effects of some experimental variables and assess the fish health status. |
| Dates | 13th July 2022 |
| Organiser | Paola Beraldo (University of Udine, Italy) |
| Subjects | Multiparametric Semiquantitative Scoring System (MSSS) a histological tool to evaluate larval and juvenile quality. (Duration: 1-1.5h) A Multiparametric Semi-quantitative Scoring System (MSSS) has been set up to estimate Gilthead seabream and European Seabass quality in the hatchery stage. This tool has been developed to monitor and highlight problems in larval batches and provide farmers with information about the impact of their managerial practices on larval condition. |
| Target Audience | <ul style="list-style-type: none"> Hatchery managers Quality-control personnel |
| Language | English |

Workshop 3: Egg and larval programming as a tool to manipulate aquaculture performance

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| Description | The hatchery stage is crucial in the production pyramid. Recent advances in biology have brought new insights into how environmental conditions can influence an organism's phenotype due to its plasticity. The biology of fish that are ectotherms is directly influenced by temperature fluctuations. This workshop will explore if manipulations of the thermal regime during the hatchery stage can modify production traits and the potential role of epigenetics in this process. |
| Dates | 15th July 2022 |
| Organiser | Deborah M Power (CCMAR, Ualg, Portugal) and Katerina Moutou (University of Thessaly, Greece) |
| Subjects | Manipulating adult fish quality at the hatchery stage – truth or myth? (Duration 1 – 1.5h) |
| Target Audience | <ul style="list-style-type: none"> • Scientists • R&D managers • Quality-control personnel |
| Language | English |

