AdriAquaNet

Enhancing Innovation and Sustainability in Adriatic Aquaculture

WP 3.3 Trainings of staff in SMEs and R&D Centers

WP3– Training nr. 3, report, November, 19, 2021

Introduction

The **third training course** entitled ""**AdriAquaNet Contributions to The Health Management of Fish Farms and The Improvement of Sustainability in Mariculture"** was held in presence on November 19, 2021 at Barco Teatro in Padua (Italy) and simultaneously in remote on the platform ZOOM https://bit.ly/3cgxKoA . It was organized by PP4 in collaboration with LP offices and external service LETTERAB. It was open to breeders, researchers, technicians and consultants in the mariculture sector. 53 participants, out of 61 registered and of which 18 followed the training online.

35 attendees got the AAN certificate of attendance.

The course had two sessions: The morning **»SESSION 1: The Contributions of the AdriAquaNet Project on the Health Management of Fish Farms«** united 4 technical presentations related to the work and topics of WP4 and the afternoon **»SESSION2: The Contributions of the AdriAquaNet project on Improving Sustainability in Mariculture«** was referred to the topics of WP3 and WP5 activities united in 7 presentations.

M. Galeotti (LP) introduced and moderated the morning session, whereas A. Fabris (API-Associazione Piscicoltori Italiani – external collaborator PP2) moderated the second session and also concluded the second session with a presentation called *»New Routes of Sustainable Aquaculture«.*

LP members (E. Tibaldi, F. DaBorso) were actively involved as speakers and participants in the activity 3.3. E. Tibaldi presented a joined lesson with J. Pleadin (PP1) entitled »*New Feed Formulations in Mariculture and their Influence on the Quality of Farmed Fish*«, whereas F. Da Borso presented a lesson entitled »*Energy production from Fish Farm Waste«.* A PP4 external collaborator *Marco Bullo (*University of Padua), involved in the WP 3.2 activities, presented a lesson entitled » *Photovoltaics (PV) and Heat Pump in Marine Aquaculture: High Efficiency and Low C02 Emissions Processes for Water Heating«,* while Roberto Pastres (Bluefarm), a LP external collaborator, presented a lesson: »*From Husbandry Practices to Carrying Capacity: An Integrated Modelling Approach*«.

The following deliverables were produced and put in SIU:

1. **Invitation in EN and IT**
2. **Agenda in EN and IT**
3. **Attendance lists of participants in presence and on zoom**
4. **Minutes of discussion with attendees**
5. **Certificates of attendance**
6. **7 Presentations of relators in EN and IT**
7. **Presentation of lessons and training materials**
8. **Questionnaire session 1 and session 2 in EN and IT**

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VALORE NUTRIZIONALE DEL PESCE E BENEFICI PER LA SALUTE
AdriAquaNet
CARATTERIZZAZIONE CHIMICO-FISICA E MICROBIOLOGICA DI BRANZINI E ORATE DI ALLEVAMENTO
Inglese pare 1
Italiano pare 2

Topics

After the session a questionnaire was distributed to the attendees. The following presentations regarding WP3 were discussed among the participants and all relators present debated about:

1. New Feed Formulations in Mariculture and their Influence on the Quality of Farmed Fish:
    a. Changes in the feed composition used for fish nutrition significantly that has an effect on: Fatty acids profile.
    b. Sea bream fed with insects had statistically significantly higher values of EPA and DHA content.
    c. Minimum presence of fish proteins and balanced intake of processed vegetable and animal proteins (PAT). appears more likely in configuring the protein origin of the new generation feed formulations for carnivorous fish in the medium term.

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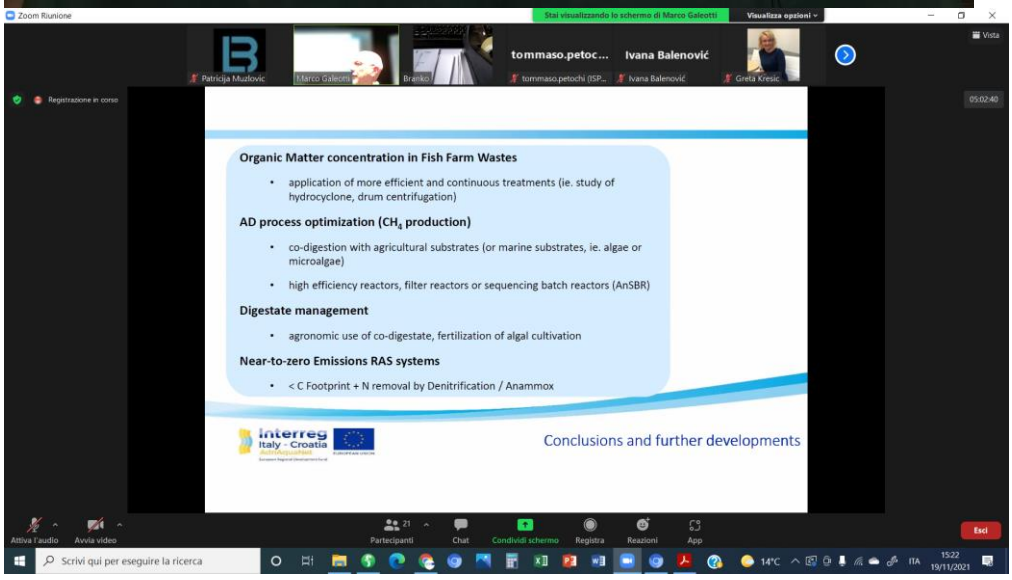
2. Energy production from Fish Farm Waste:
    a. Anaerobic digestion of fish farm waste leads to the production of biogas, that is composed by Methane (about 50-70%), Carbon dioxide (30-50%), some ppm of hydrogen sulphide, and other gases in traces



3. Photovoltaics (PV) and Heat Pump in Marine Aquaculture: High Efficiency and Low C02 Emissions Processes for Water Heating:
    a. The coefficient of performance (COP) of a heat pump is dependent on outside temperature: 3 is the average COP above 10 °C

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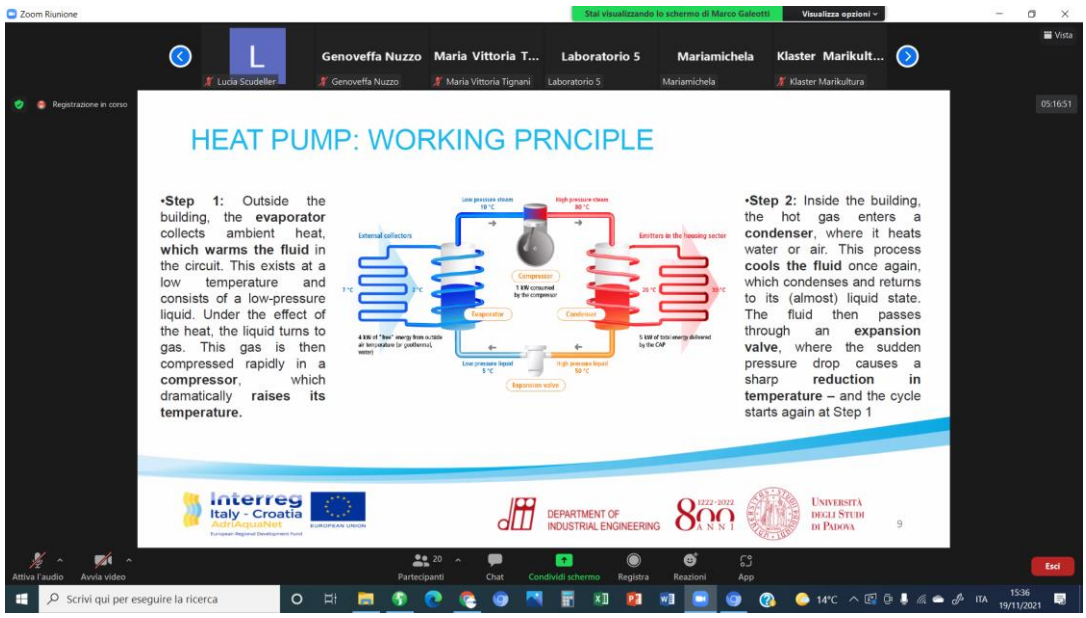

4. From Husbandry Practices to Carrying Capacity: An Integrated Modelling Approach

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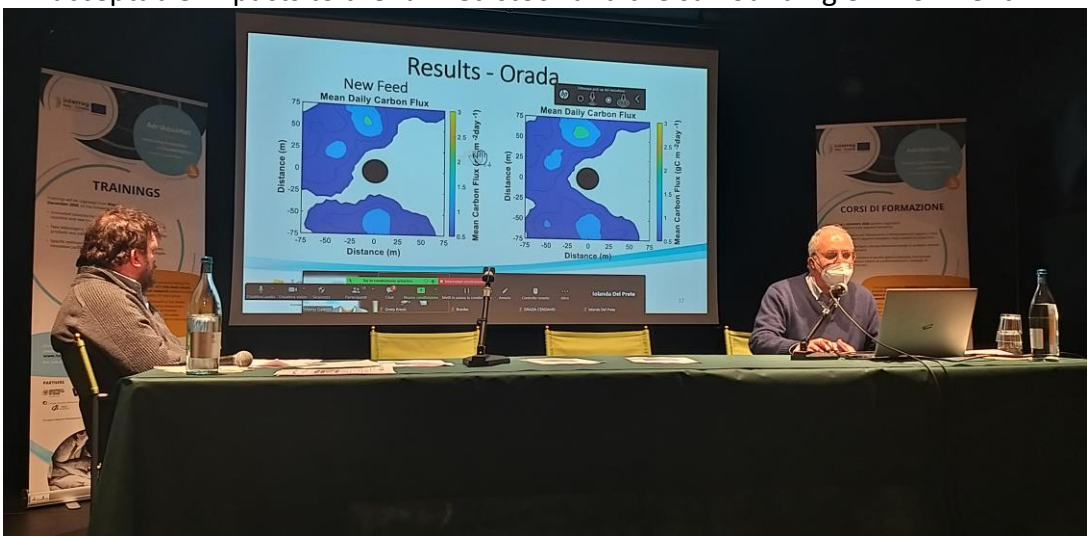
a. The definition of the production carrying capacity, in relation to cage fish farming: the maximum biomass that can be farmed, without exceeding the maximum acceptable impacts to the farmed stock and the surrounding environment.



Conclusions and Next Steps

The following training will be organized in presence in Croatia or online probably in 2022, according the sanitary situation.

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