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Certificate

This is to certify that

Viktoriia Vechorka

from

Sumy National Agrarian University (Ukraine)

participated in the training at
University of Dubrovnik (Croatia)

within the framework of the
AFISHE

**“Development of Aquaculture and Fisheries Education for Green Deal in
Armenia and Ukraine: from education to ecology”**

Erasmus+ CBHE project on 26.02.2024 – 08.03.2024.

The training is 90 hours and 3 credits.

**Associate Professor Marijana Pećarević,
PhD**

Garegin Hambardzumyan

**Vice-Rector for International Relations and
science
University of Dubrovnik**

**AFISHE project coordinator
Head of International Relations Department
Armenian National Agrarian University**

08 March 2024

A handwritten signature in blue ink, likely belonging to Garegin Hambardzumyan.



Topics of the training

Breeding Technologies in Mariculture

THEORETICAL TOPICS

- 1) OVERVIEW OF COURSE CONTENT**
- 2) FISH REPRODUCTION (3 h)**
- 3) REGULATION OF REPRODUCTION IN FISH**
- 4) REPRODUCTION OF FISH IN CAPTIVITY**
- 5) BROODSTOCK HUSBANDRY, SPAWNING AND EGG INCUBATION PROTOCOLS AND TECHNOLOGY FOR FRESHWATER FISH SPECIES**
- 6) BROODSTOCK HUSBANDRY, SPAWNING AND EGG INCUBATION PROTOCOLS AND TECHNOLOGY FOR MARINE FISH SPECIES**
- 7) LARVICULTURE AND CULTURE OF JUVENILE FISH - CRITICAL POINTS DURING EARLY DEVELOPMENT**
- 8) LIVE FEED PRODUCTION**
- 9) LAYOUT AND MANAGEMENT OF FISH HATCHERY**
- 10) BREEDING OF CRUSTACEANS IN CAPTIVITY**
- 11) REPRODUCTION OF COMMERCIALY INTERESTING CRUSTACEANS FOR AQUACULTURE**
- 12) BREEDING OF BIVALVES IN CAPTIVITY**
- 13) HATCHERY PRODUCTION OF COMMERCIALY INTERESTING BIVALVES**
- 14) BREEDING TECHNOLOGIES FOR OTHER SPECIES IN AQUACULTURE**

PRACTICAL CLASSES AND ACTIVITIES:

- **Laboratory classes:** dissection of fish (reproductive organs, comparison of juvenile and adult male and female, calculation of GSI), histology of gonads before, during and after gametogenesis, small-scale rotifer production, Artemia decapsulation, observing development of embryo and larvae in currently available aquatic species
- **Visit to other in-house facilities:** bivalve hatchery, bivalve farm and overview of wild bivalve spat collection process for the purpose of aquaculture
- **Visits to external entities (fish farm and bivalve farm).**