

## INSTITUTE FOR MARINE BIOLOGY-KOTOR

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**Director:** Ph.D. Sreten Mandić

**NACEE liaison officer:** Mandić Milica (smandic@ibmk.org) Ph.D. candidate

### 1. Position in the national R&D system

The Institute for Marine Biology, Kotor, was established in 1961 answering the need for organized scientific expert investigations in the field of marine bioecology and marine fisheries in the South Adriatic part of the coast of Montenegro. The Institute is located in Kotor, in a building of exceptional construction and locality value, which totally satisfies the present and future needs for the mentioned activities.

### 2. Main research area

Scientific research activities are performed in the following laboratories of the Institute:

General biology and mariculture:

- phytoplankton
- zooplankton
- ichthyology
- benthos
- mariculture

Neurobiology:

- neurochemistry
- neurohistology
- brain research
- CNS
- biology of behaviour, on the models of marine organisms

Ecophysiology:

- electrophysiology

Chemistry, biochemistry and molecular biology:

- chemistry of natural products
- organic chemistry
- biochemistry
- molecular biology
- chemical ecology

In the frame of the Development sector for progress and organization of marine fisheries and mariculture with transfer and application of new technology:

- development projects
- mariculture

### **3. Staff**

- Total: 35
- Scientists: 21
- Technicians: 9
- Support personnel: 5

### **4. Budget**

About 400 000 euros for a year

### **5. Events organized by the Institute**

The Institute is an organizer of a large number of domestic and international scientific meetings in Kotor, and was a co-organizer of a significant number of events of the same kind outside of Montenegro and the former Yugoslavia. The Institute publishes its own scientific journal “Studia Marina” which is exchanged with a large number of institutions in the country and abroad. In the Institute, a lot of doctoral dissertations were made with practical and theoretical results in different fields, together with about ten universities.

### **6. Involvement in EU projects**

The Institute is involved in three projects: INTERREG III A, one FAO project and one project of UNESCO.

### **7. International collaboration and other activities**

- Education (lectures, summer schools, short courses, postgraduate studies, Ph. D. theses, studies on different commercial problems)
- International scientific cooperation (UNESCO, UNEP, FAO-GFCM, IOC, WHO, ISCEM, bilateral scientific cooperation with Italy, Russian Federation, Germany, France, USA, Hungary, China, Norway, etc.)

### **8. Projects in preparation:**

- Benthic biocenoses (bottom communities) of coastal waters of Montenegro.
- Monitoring of biological resources in coastal waters of Montenegro.
- Biological investigations of the influence of organic pollutants on the nervous system of aquatic organisms.
- Studying the influence of anthropogenic eutrophication on coastal waters of Montenegro.

**LABORATORY OF BIOTECHNOLOGIES, ASTRAKHAN STATE UNIVERSITY**

20a Tatishcheva St., 414056 Astrakhan, Russian Federation

Webpage: <http://www.aspu.ru>**Head of laboratory:** Mikhail Egorov**NACEE liaison officer:** Mikhail Egorov ([egorov@astranet.ru](mailto:egorov@astranet.ru))**1. Position in the national R&D system**

The Laboratory of Biotechnologies of Astrakhan State University (ASU) is one of the large scientific units of the University. It is among the 5 most dynamically developing innovation structures of the University belonging to the Federal Education Agency of the Russian Federation. It is the leading research laboratory on biotechnology in Russian Federation in the fields of cryobiology, research of the cryoprotection mechanisms of the genetic material of hydrobionts and cultured species with high commercial value, development of systems for microbiological monitoring of water quality at fish farming enterprises, systems of treatment and rehabilitation of the biological equilibrium and self-purification in natural and artificial water bodies used in aquaculture, production of promising biologically active compounds (BACs), biological preparates from natural components for increasing the survival of high-value cultured species in aquaculture farms, protection of fish farming facilities from pathogenic microflora, etc. The Laboratory of Biotechnologies is a constant participant of international exhibitions, congresses and meetings both in Russian Federation and abroad.

**2. Main mandate**

Innovative research and development, training and consultancy, utilization and protection of water resources for the development of life quality and healthy nourishment, including:

- Research on cryobiology of aquaculture species;
- Research on microbiological monitoring of water bodies used for aquaculture;
- Research on ecological biotechnology;
- Research on microbiological water quality, with special regard to pond and intensive systems;
- Development of production of biological preparates for improving the survival of high-value aquaculture species;
- Training and capacity building programmes in cryobiology, aquaculture, ecological microbiology, biotechnology.
- Participation in capacity building and international training courses in the fields of fisheries, aquaculture, cryobiology and biotechnology. Active participation in large international conferences and exhibitions.

**3. Staff (by qualification/age/gender)**

- Total: 10
- Scientists: 7 (4 full-time + 3 contracted); 4 Doctors of Sciences, 2 Candidates of Sciences (i.e. 6 persons with PhD degree)
- Support personnel: 3
- Average age: 44 years
- Ratio of females: 60%

#### **4. Budget (structure of income): about 1.5 million RUB (about 44 000 Euro) (2006)**

Income structure:

- Core fund from the Federal Agency: 30%
- National competitive grant funds: 15%
- National contracted research programmes: 50%
- International competitive grant funds: 3%
- Services: 2%

#### **5. Main research areas**

Innovative research and development, training and consultancy, utilization and protection of water resources for the development of life quality and healthy nourishment, including:

- Cryopreservation of genetic material: development of cryoprotectors, alternative technologies of storing cryomaterials.
- Development of a cryobank of the genetic material of high-value aquaculture and agriculture species;
- Microbiological monitoring of water bodies used for rearing aquaculture species;
- Ecological biotechnology – development of systems for treatment of production water using local natural sorbents, development of original biofilters with nanocomponents;
- Creation of biological preparates for improving the survival of high-value aquaculture species;
- Elaboration and teaching of disciplines included in educational curricula and training programmes in cryobiology, aquaculture, ecological microbiology, biotechnology.

#### **6. Events organized regularly by the university (laboratory)**

- Scientific and Practical Seminar (ASU Technopark, Astrakhan) on «Cryopreservation of Endangered Aquaculture Species» supported by the Support Fund for Small Enterprises in the Field of Science and Technology (Moscow). (43 participants from 7 organizations).
- Annual All-Russian Scientific Conference on Ecological and Biological Problems of the Volga-Caspian Basin (Biotechnology Section) (ASU, Astrakhan). The 10th Conference in 2005 was held with the participation of about 250 participants of various stakeholders in the fields of ecology and biological resources of the given region (32 people in the Biotechnology Section).

#### **7. International collaboration (with formalized agreements)**

- Worcester Polytechnic Institute (WPI), Worcester, Massachusetts, United States of America
- Università di Perugia, Italy
- Università Ca' Foscari, Venice, Italy
- Institute of Foreign Trade, Hanoi, Viet Nam
- Danang University, Viet Nam
- Zagazig University, Egypt

#### **8. Existing cooperation with other NACEE members**

Currently, on the level of consultations with some researchers from Russian NACEE member institutions

## **9. Involvement in EU projects**

Ongoing projects:

- Will start in 2007

Projects in preparation:

- TEMPUS
- INTAS (joint projects with Italian universities)

**UKRAINIAN STATE INSTITUTE FOR PROJECTING FISHERIES AND FISH  
INDUSTRY ENTERPRISES (“UKRRYBPROEKT”)**

82-A, Turgenevskaya St., 04050 Kiev, Ukraine  
Tel.: (044) 486-6808, Fax: (044) 486-6950  
Webpage: <http://www.rybproekt.kiev.ua>

**Director:** Aleksandr Vladimirovich Ignatov  
**NACEE liaison officer:** Irina Sigizmundovna Il'ina

### **1. Position in the national R&D system**

The Ukrainian State Institute for Projecting Fisheries and Fish Industry Enterprises is the leading – and only – institute in Ukraine in the field of projecting fisheries enterprises.

### **2. Main mandate**

The main directions of the Institute's scientific and technical activities are:

The institute has the functions of the leading projecting institute in the system of Ukrainian fisheries:

Elaboration of development and location schemes of fisheries and fish industry enterprises;  
Methodology of projecting enterprises for the fish sector;

Projecting of engineering equipment for fisheries and fish industry objects.

Development of technical and economic calculations, projects, work projects and work documentation for construction of:

- Fish hatcheries, fry production rehabilitation centres, selection and genetic centres, spawning and nursing farms, industrial fish farms, incubation and nursing units, wintering complexes for the stocking material, live fish storage bases, market fish farms (pond, tank, cage, lake, estuarine, marine) and farms for rearing other aquatic living resources (mussels, oysters);
- Fish product factories, fish processing and canning factories and plants, factories and plants producing tin cans and wooden tare, net factories, fishing gear producing plants;
- Marine fishing ports and their facilities - moorages, warehouses for fish products, material and technical equipment of ships and tare;
- Ship repairing enterprises and their individual plants;
- Refrigerators for storing fish, fish and other products, warehouses for fish cans, fish receiving stations;
- Engineering preparation of land for construction sites; systems of engineering services (water supply, sewer system, heating, ventilation, conditioning, control and measuring devices and automatization, communication, signalization and radio installation); transport constructions; hydrotechnical constructions; nature protection objects and constructions.

Execution of geodetic engineering, geological engineering and hydrometeorological engineering surveys for constructions.

Making inventories of lands of all categories, cadastre surveys, projects on giving lands into property or use, elaboration of technical documentation with compilation of national acts on land property or land use rights, delimitation of the allotted territories on the site.

Elaboration of the Fisheries chapters for:

- plans of the development and location of the sectors of the national economy;
- plans of the complex utilisation of aquatic resources and protection of the surrounding natural environment;
- different construction projects of other ministries and authorities affecting the interests of the fisheries sector.

Engineering and services in construction:

- technical assistance to the customer in preparing objects to projecting and construction;
- author's control of the construction, assistance in reaching the design capacities of the farms;
- control, consultations, information and other services in the activity profile of the institute;
- development of normative, legislative and methodological documentation,
- research and construction work, expert evaluation of investment projects.

### **3. Staff (by qualification/age/gender)**

- Total: 82
- Higher education: 100%
- Doctor of Sciences: 1
- Candidates of Sciences: 2
- Scientists: 7
- Average age: 40 years
- Ratio of females: 50%

### **4. Budget (structure of income) about 2.5 million UAH (370 000 EUR) (self-financing)**

Income structure: National competitive grant funds

### **5. Main research areas**

- Development of water-saving and environmentally friendly fish culture technologies.
- Fish nutrition and feeding (study of the factors determining the feed utilization and the fish meat quality).
- Structure and functioning of fishpond ecosystems.
- Production, fisheries and utilization of natural waters.
- Environmental management in agriculture.
- Irrigated plant production technologies.
- Rice culture and development of industrial technologies.

### **6. Events organized regularly by the institute**

Annual organization of and participation in symposia and conferences on development and projecting of fish farms:

- International Green Week – Germany,
- World Fishing Exhibition – Vigo, Spain,
- Agro – Ukraine,
- International Aquaculture Conference – Ukraine.

**7. International collaboration (with formalized agreements)**

- Estonia - projecting
- Russian Federation - projecting
- Afghanistan - projecting
- Poland - projecting
- Germany - projecting

**8. Existing cooperation with other NACEE members**

None

**9. Involvement in EU projects**

None