



RE-ACCREDITATION OF

University of Dubrovnik – Department of Aquaculture

Date of the site visit:

25th of April

May 2013

COMPOSITION OF THE EXPERT PANEL

- Prof Mark Davies, University of Sunderland, United Kingdom
- Dino Grozić, student, Department of Biology, Faculty of Science, University of Zagreb
- Dr Aristomenis Karageorgis, Institute of Oceanography, Hellenic Centre for Marine Research, Athens, Greece
- Dr Mirjana Najdek Dragić, Ruđer Bosković Institute Center for Marine Research, Rovinj, Croatia
- Prof Tomislav Treer, Faculty of Agriculture, University of Zagreb, Croatia

Expert panel was supported by:

- Vlatka Šušnjak Kuljiš, coordinator
- Frano Pavić, support coordinator
- Goran Briški, translator

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INTRODUCTION

Short description of the evaluated institution

NAME OF HIGHER EDUCATION INSTITUTION: **University of Dubrovnik – Department of Aquaculture**

ADDRESS: **Branitelja Dubrovnika 29, Dubrovnik**

NAME OF THE HEAD OF HIGHER EDUCATION INSTITUTION: **prof. Vlasta Bartulović, Ph.D.**

ORGANISATIONAL STRUCTURE (e.g. chairs, departments, centres): **Head of Department, Expert Council**

LIST OF STUDY PROGRAMMES (and levels): **Undergraduate study of Aquaculture, Graduate study of Mariculture and Inter-university postgraduate course of Applied Marine Science**

NUMBER OF STUDENTS (part-time/full-time/final-year):

NUMBER OF TEACHERS (full-time, external associates): **15 professors in scientific-teaching grade, 4 professors in teaching grade, 8 external associates and 15 junior researchers/teaching assistants**

NUMBER OF SCIENTISTS (doctors of science, elected to grades, full-time): **2 researchers in biotechnology field (and two more teaching assistant with PhD and one pursuing a PhD), 4 researchers/PhDs in natural sciences (biology) and one in veterinary sciences.**

Within the university as an integrated institution there are 8 more PhDs/associates in natural sciences (by majority in biology) taking part departmental activities.

TOTAL BUDGET (in kuna): **60.989.394 HRK (app. 8 million euro)**

MSES FUNDING (percentage): **46,.762.636 HRK (app. 6 million euro)**

OWN FUNDING (percentage): **5.486.608 HRK (app. 731.000 euro)**

SHORT DESCRIPTION OF HIGHER EDUCATION INSTITUTION:

In an effort to promote the role of higher education and science in Dubrovnik, the Charter on the Development of Dubrovnik as an International Science and Education Centre

(DISEC Charter) was signed on July 10, 1999, which, as was proved later on, paved the way to establishing the University of Dubrovnik. At the proposal of the Ministry of Education and Technology the draft Act on Establishment of University of Dubrovnik was unanimously supported by the Government of the Republic of Croatia, while on October 1, 2003 the Act was passed unanimously by the Croatian Parliament.

In the academic year 2004/2005 the first generation of students enrolled on twenty undergraduate and six professional study programmes in technical, biotechnical and social sciences aligned with the recommendations of the Bologna process. Thereby the University of Dubrovnik became the first higher education institution in the Republic of Croatia to introduce a new higher education model recommended *Europe-wide*.

On November 15, 2005 the Senate of the University established the Institute for Marine and Coastal Research making it its constituent scientific unit.

Department of Aquaculture is University of Dubrovnik constituent without legal personality.

Institute of Marine and Coastal Research, MARIBIC Ltd. and the Department of Aquaculture of the University as the three components are link in aquaculture production. The Institute conducts scientific research in biology and ecology of marine organisms, MARIBIC Ltd. develops the ability to implement new information in aquaculture production and the Department of Aquaculture trained experts in the field of aquaculture.

The work of the Expert Panel

For its work the Panel drew upon the Self-Evaluation Report, prepared by the (name of the faculty/polytechnic/college). A site visit was carried out on 25th of April 2013. During the visit to the Department the Expert Panel held meetings with representatives of the following groups:

- the Management (Rector , Vice Rectors, and Head of Department);
- the Working Group that compiled the Self-Evaluation and the Committee responsible for internal quality assurance;
- the students;
- teaching assistants and junior researchers;

etc.

On 24th of April the Expert Panel visited the Mariculture Business Innovation Centre (MARIBIC) Ltd in Bistrina. The Centre was established in 2008 and acts a liaison between the University and industry, offering educational and technological support.

The Expert Panel also had a tour of some library facilities, IT rooms, and some classrooms, where they held a brief question and answer session with the students who were present. As part of that tour the Expert Panel visited the Institute for Marine and Coastal Research of Dubrovnik.

DETAILED ANALYSIS BASED ON STANDARDS AND CRITERIA FOR RE-ACCREDITATION

1. Institutional management and quality assurance

- 1.1 Strategic planning at the level of the University is well-developed and appropriately engages a range of stakeholders. Institutional goals and vision are clearly articulated.
- 1.2 The organisational structure is effective and understood by staff and, in general, its processes are formalised, having appropriate legal status.
- 1.3 The Department is wholly integrated into the University and plays a significant role in the realisation of the University's vision. The Department's implicit strategy, as defined by its actions, matches that of the University.
- 1.4 The study programmes under scrutiny make considerable contributions, particularly at local and national levels, and in part demonstrate excellence, thus demonstrating alignment with the University's mission.
- 1.5 The University is at an early stage in the development of its quality systems and as a result a palpable quality policy is yet to be formulated. The University does, however, have definite plans in this area, to be developed and promoted in part by a dedicated quality officer. Thus quality procedures are not yet well connected and some, for example programme monitoring, are yet to be formulated or do not operate on a cycle of activity. There is a blur between monitoring and review processes and a lack of understanding by staff of the relationship between review, programme change and re-accreditation. As yet there is no systematic activity with respect to quality enhancement. It is therefore recommended that the University moves to implement its plans to develop its quality systems without delay.
- 1.6 Information management and its use in informing activities are laudable. Students are involved both as a source of data and in its management, though it is recommended that information from employers is more fully utilised, particularly in curriculum development.
- 1.7 Mechanisms for monitoring and improving teaching quality are in place locally, but are limited in scope and principally involve the analysis of questionnaires. It is recommended that the Department consider deploying more sophisticated ways of enhancing the quality of teaching.
- 1.8 Research quality is systematically evaluated through established methods that concentrate on the scrutiny of research outputs; but which also consider the sources and value of grant income, and the number and quality of research degrees awarded.
- 1.9 The University has developed a robust system for monitoring ethical behaviour, not only relating to the inter-relations of staff and students, but also to the ethical treatment of experimental animal subjects. The panel noted a broad understanding among students and staff.

2. Study programmes

- 2.1. The study programmes have been approved by the standard governmental procedures. Monitoring of existing study is performed, although not systematically or at a strategic level.
- 2.2. Enrolment quotas are established according to a specific procedure, but the needs of society are not clearly stated. It is recommended that the institution conducts a systematic analysis to determine the needs of society that might better inform its enrolment quotas, though the panel understand that recruitment targets are not always readily achievable.
The undergraduate study of Aquaculture has proved not to be very attractive, as judged by student enrolments. It is recommended that consideration be given to the creation of a new undergraduate study programme with a holistic approach to marine sciences. This might avoid the limited repetition of curricula as occurs presently, particularly between bachelors and masters study. Moreover, if such a study programme were developed with, or exported to, other universities along the Adriatic coast that might significantly strengthen mobility. Consideration should be given to unique selling points to attract students.
- 2.3. The enrolment quotas are low and this facilitates a high quality learning experience.
- 2.4. Learning outcomes are considered as provisional and have been developed thus far for undergraduate study only, though there are plans for their development for graduate study. As yet the learning outcomes do not accurately reflect the attributes of the graduates, which is to be expected in an organisation that has only recently started to develop quality processes. As a result the panel recommends that, in conjunction with the development of the University's quality processes, learning outcomes are defined or revised to accurately reflect the attributes of graduates and are in alignment with the Croatian Quality Framework.
- 2.5. As the creation of learning outcomes is at an initial phase, their implementation and link to assessment is yet to be developed. Once learning outcomes have been produced a constructive alignment with assessment will be necessary, and is recommended.
- 2.6. For the most part of most of the programmes, the allocation of ECTS tariff is justifiable, though for a small number of elements the tariff is likely to be overestimated or underestimated and it is recommended that all tariffs be reviewed to ensure parity and consistency.
- 2.7. All study programmes proved to be internationally recognized in practice.
- 2.8. Many of the teachers engage in motivational teaching techniques, as evidenced by the panel and students, and clearly aim to produce autonomous learners.
- 2.9. Supplemental resources appropriate in both quality and quantity are made available to students by teachers.
- 2.10. Although the learning outcomes are in the starting phase of their implementation, students have many opportunities for practical applications of their academic study.

3. *Students*

- 3.1. On paper, student competencies on admission generally allow the development of competencies in careers, but pass rates of undergraduate and graduate students could be much higher. It is difficult to ascribe low pass rates to deficiencies in the admissions system and the Department is well aware of the situation. However, there was no evidence of regular reviews of the admissions criteria and it is recommended that such a system be put into place.
- 3.2. The Department provides sustained support to, and encourages students, in their extracurricular activities.
- 3.3. The Department provides students with counselling, mentorship and professional orientation, which are available on self-referral by students.
- 3.4. The Department shows an active interest in student standard but the overall situation, managed by the University, concerning cafeterias and accommodation is not entirely satisfactory. There are plans for a new dormitory, which will alleviate matters somewhat, but these are not at an advanced stage. It is recommended that the department, in cooperation with the University and local administration, pursues vigorously currently active means and investigates other means to address the student standard. Such activities are considered essential if the University's vision is to be realised: the possibility of increasing the number of students from outside Croatia will be low until these issues are resolved.
- 3.5. Students are informed of methods and procedures of assessments, receive timely and good quality feedback from teachers and have a formal possibility of appeal. The students are aware of these processes.
- 3.6. Communication between the Department and its alumni is well established and there is some monitoring of employability.
- 3.7. Students are members of various deliberative bodies such as Senate and the department's Expert Council; therefore they have the opportunity to participate in decision-making processes and expressed satisfaction with these arrangements.
- 3.8. The Department has effective means for informing the public about its academic activities, though not about learning outcomes, since these are still in development. However, much activity is at a local scale and it is recommended that the detail and transmission means of such information, specifically advertising in all its forms, be revised with the aim of attracting motivated students from outside both Dubrovnik-Neretva county and Croatia, and that consideration should be given as to how current students, whom the panel regard as good ambassadors, can play a role in the management of public information. The Department should also encourage students and potential students to participate in University fairs and thematic events.
- 3.9. The Department acknowledges students' opinions and their proposals for improvement. Students were satisfied on this point.

- 3.10. Students receive feedback information about measures implemented on the basis of their suggestions and opinions, principally through the department's Expert Council.

4. *Teachers*

- 4.1. The number of teachers is adequate to cover the core disciplines of the Department, and the level of expertise is high. The ratio between permanent teachers and associate or external teachers is good.
- 4.2. The University carries out its policy of growth and development of human resources. This policy naturally extends to the Department, which is therefore favoured to have the critical number of teachers in permanent positions.
- 4.3. The quality and continuity of teaching is maintained in part because the Department has the required number of permanent position teachers.
- 4.4. The ratio between students and full-time teachers is not currently optimal: the Department has too few students in relation to its staff complement. The teachers contribute in many ways to the functioning of the Department and their number should not be seen as in need of reduction. Thus it is recommended that ways are found to increase the number of students. Without such remedy the Department could become unsustainable.
- 4.5. Commensurate with a quality assurance system in its initial stages of development, the University and Department lack policies for the development of the skills and competencies of teaching. In order that the department's teachers can offer a learning experience to their students based on global good practice, it is recommended that staff development needs and priorities are identified and that staff are systematically trained and developed in learning and teaching in higher education.
- 4.6. The Department follows the national criteria for the assessment of qualifications and expertise of its teaching staff. However, there is no extension to the national criteria for employment and promotion, and it is recommended that such be formulated and implemented.
- 4.7. The University has determined effective policies governing the assignment of teachers' workloads.
- 4.8. The Department ensures that teachers are devoted to their educational and research work and are not overly distracted by external commitments.

5. *Scientific and professional activity*

- 5.1. The Department manages efficiently the research agenda and its implementation.

- 5.2. Scientific and industrial organisations are part of the research agenda implementation, particularly within Croatia, and efforts are made to extend across Europe.
- 5.3. Research is clearly valued by the Department and University. Collaborative research, for example with MARIBIC, is a strong component of the Department thus consolidating its reputation. Research reputation would be further enhanced by the development of new collaborations both within and outwith Croatia.
- 5.4. Young researchers are continuously supported by the Department for the amelioration of their research activities. Of particular note is the provision of mentors.
- 5.5. Research excellence is not clearly supported by a specific policy, but is maintained at a high level, in relation to the size and scale of the department. For example, the Department holds a respectable number of research projects, some of them supported by the extremely competitive Framework Programme 7 of the EU.
- 5.6. Again there is no specific policy, but publishing activity is adequate: there is a substantial number of scientific publications in national and international peer-reviewed journals, occasionally with high impact factors, thus demonstrating the high research profile of the staff.
- 5.7. The Department records regularly publications, citations and other indices.
- 5.8. Overall the Department shows good practices in respect of knowledge and technology transfer, and monitors their progress; the close and successful collaboration with MARIBIC is a good example.

6. Mobility and international cooperation and mobility

- 6.1. The Department effectively facilitates and promotes mobility of students from other higher educational institutions, though this activity could be expanded.
- 6.2. Several students that the panel met had completed part of their programmes abroad. The period spent abroad is fully recognized by the University and help for students is available from the International Relations Office.
- 6.3. The institution encourages mobility of its teachers and some assistants and lecturers have travelled abroad for short periods of time, largely on the basis of their personal contacts. However, there is no analysis of these experiences in order to improve the department. It is recommended that a systematic approach be developed to the international cooperation and mobility of teachers, to include means of exploiting such activities for the benefit of the department. Staff employment opportunities are given limited advertising, confined to Croatia and it is recommended that the university adopts a policy of global advertising of posts to secure the best possible pool of candidates and thus ensure quality of future staff. This move would also bring closer alignment with the University vision.

- 6.4. The institution has appropriate links to various international professional and scientific bodies.
- 6.5. The Department has shown some initiative in attracting overseas students, such as inviting foreign scientists to teach in English and organizing a summer semester within the Erasmus scheme. Although it is acknowledged that a lack of student housing might pose a problem for attracting foreign students, it is recommended that the Department take further steps to secure attractive conditions for overseas students, including the possibility of the existing teachers offering the programmes in English.
The Department has recently organized one semester of graduate study in English. The possibility of enhancing this effort could be explored to create the necessary conditions for delivery of the whole graduate study of Mariculture in English. This could attract students from abroad, and help enhance local recruitment, which at present is limited in quality and quantity. Such transformative action would need to balance existing facilities and the number of skilled staff. The attractive nature of the City of Dubrovnik should not be underestimated and city authorities could be involved in any planning.
- 6.6. The institution has established cooperation with a wide range of research institutions in Europe from which a number of bilateral and international projects have resulted. It also participates in student, teacher and researcher mobility programs (Erasmus, Tempus, Euraxess).

7. Resources: administration, space, equipment and finances

- 7.1 The institution partly provides appropriate sources for all enrolled students. Students are provided with enough classrooms, computers, library resources, laboratories and equipment, particularly those resources offered at MARIBIC. However, individual and group study places and the size of some laboratories at the Institute of Marine and Coastal Research are limiting student study opportunities. It is recommended that consultations are held with students to formulate a better organization of the existing space at the Institute of Marine and Coastal Research in order to enhance the effective learning of students.
- 7.2 The ratio of teaching and non-teaching staff is appropriate.
- 7.3 The qualifications of non-teaching staff are appropriate and the institution provides for their professional development.
- 7.4 The organization of the laboratories located at the Institute of Marine and Coastal Research could be improved and it is recommended that usage and space utilization is reviewed to align with the recognized international standards. In particular laboratories should be used as laboratories only and equipment placed in locations where there is sufficient space for all users to circulate freely.
- 7.5 The equipment and technical support for its use is ensured and covers relevant activities. The virtual learning environment, DUEL, is undervalued and underused. Its full potential is yet to be explored and the panel encourages the University to exploit DUEL's capability

creatively in the pursuit of enhancing the student experience, drawing on practice from across the globe.

- 7.6 Owing to the relatively small size of the library much material is provided to students via exchange schemes with other libraries. Cataloguing of the library's resources is not yet digital. The panel shares students' concerns that the library's opening hours do not meet their needs and it is recommended that opening hours are prolonged or adjusted in response.
- 7.7 The sources of finance and all conditions related to financing are transparent and facilitate the success of students on the programmes.
- 7.8 The University finances learning and scientific activities in accordance with its formal documents.

FINAL REPORT AND RECOMMENDATIONS BY THE EXPERT PANEL FOR THE ACCREDITATION COUNCIL

Following the evaluation, the panel states the following advantages (strengths) and disadvantages (weaknesses) of the Department that in part serve as the basis for recommendations, with the ultimate goal of improving the quality of this higher education institution and securing enhanced learning for its students. The salient feature must be the evident care shown by the staff for the students in the Department.

ADVANTAGES (STRONG POINTS)

1. Strategic planning at the level of the University is well-developed
2. The organisational structure is, in general, effective
3. Study programmes have well-designed curricula that are likely to meet the needs of employers
4. Research outputs are commensurate with the size of the group and show promise
5. Participation in national and international research projects is developing
6. Collaboration with local organisations and industry
7. The positive relationship between staff and students
8. The location in the City of Dubrovnik: can be exploited to attract overseas students

DISADVANTAGES (WEAK POINTS)

1. All aspects of quality management are at a very low level
2. Development of teaching staff is not implemented
3. Progression and completion rates could be much higher
4. Overall the student standard is not favourable, almost wholly owing to dormitory provision
5. Various opportunities are missed to promote the above advantages on a global stage
6. Unfavourable student to full-time teacher ratio
7. Some laboratory space could be better organised
8. The location in the City of Dubrovnik: competition for beds, particularly over the summer, results in a costly student experience

RECOMMENDATIONS FOR IMPROVEMENT OF QUALITY

1. Management of the Higher Education Institution and Quality Assurance

The panel recommends that

- the University moves to implement its plans to develop its quality systems without delay (1.5)
- information from employers is more fully utilised in the Department's activities, particularly in curriculum development (1.6)
- the Department consider deploying more sophisticated ways of enhancing the quality of teaching (1.7)

2. Study Programmes

The panel recommends that

- the institution conducts a systematic analysis to determine the needs of society that might better inform its enrolment quotas (2.2)
- consideration be given to the creation of a new undergraduate study programme with a holistic approach to marine sciences (2.2)
- in conjunction with the development of the University's quality processes, learning outcomes are defined or revised to accurately reflect the attributes of graduates and are in alignment with the Croatian Quality Framework (2.4)
- once learning outcomes have been produced, a constructive alignment with assessment is achieved (2.5)
- all ECTS tariffs be reviewed to ensure parity and consistency (2.6)

3. Students

The panel recommends that

- a system of regular reviews of the admissions criteria is implemented (3.1)
- in cooperation with the University and local administration, currently active means to address the student standard are pursued with vigour and other means are investigated (3.4)
- the detail and transmission means of public information, specifically advertising in all its forms, be revised with the aim of attracting motivated students from outside both Dubrovnik-Neretva county and Croatia (3.8)
- consideration should be given as to how current students can play a role in the management of public information (3.8)
- students and potential students are encouraged to participate in University fairs and thematic events (3.8)

4. Teachers

The panel recommends that

- ways are found to increase the number of students to optimise the ratio between students and full-time teachers (4.4)
- staff development needs and priorities are identified, and staff are systematically trained in learning and teaching in higher education (4.5)
- one or more extensions to the national criteria for employment and promotion should be formulated and implemented (4.6)

5. Scientific and professional activity

There are no recommendations under this section.

6. International Cooperation and Mobility

The panel recommends that

- a systematic approach be developed to the international cooperation and mobility of teachers, to include means of exploiting such activities for the benefit of the department (6.3)
- the university adopts a policy of global advertising of posts (6.3)
- Further steps are taken to secure attractive conditions for overseas students, including the possibility of the existing teachers offering the programmes in English. (6.5)

7. Resources, administration, space, equipment and finance

The panel recommends that

- consultations are held with students to formulate a better organization of the existing space at the Institute of Marine and Coastal Research (7.1)
- usage and space utilization of the laboratories located at the Institute of Marine and Coastal Research is reviewed to align with the recognized international standards (7.4)
- library opening hours are prolonged or adjusted in order to meet students' needs (7.6)