

UNIVERSITY OF THESSALY
SCHOOL OF AGRICULTURAL SCIENCES
DEPARTMENT OF ICHTHYOLOGY
AND AQUATIC ENVIRONMENT

Evaluation Committee
Department of Ichthyology and Aquatic Environment

INTERNAL EVALUATION REPORT
Academic semesters: winter 2008/'09 – spring 2008/'09

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Volos

CONCLUSIONS AND STRATEGIC PLANNING

The Department of Ichthyology and Aquatic Environment was established in September 2002 (as Department of Agriculture, Animal Production and Aquatic Environment), with a Departmental meeting of seven (7) staff members. At the end of the academic year 2002-2003, the number of staff members was nine (9) members, while, in the beginning of the following academic year, this number increased to eleven (11). On 18.11.2003, the Department became independent. The number of staff members employed at the Department was more than doubled, reaching seventeen (17) members, and it is to increase by 35 per cent, approximately, given that the appointment of another six (6) staff members is expected to take place in the following academic year.

It is evident that recruitment of the Department is done at a very quick pace, which exceeds by far that of other Departments in the country. Its recruitment has followed a well-organized policy, aiming, initially, at covering the modern core disciplines offered at the Department (vertical organization structure). Naturally, this policy has not deprived the Department of its recruitment with staff members specializing in similar disciplines, where it was deemed that, this way, its needs are better satisfied. Such professors, due to their young age, show great zeal in carrying out their duties (teaching, research, and administration) and, along with the high degree of experience and knowledge of the Department's high-ranking staff, they have constituted a solid team of professors who have managed to make the Department well-know at all levels throughout the academic community of the University of Thessaly and Greece, in general.

Currently, the Department, within a few years since its establishment, features the following:

1. Remarkable level of graduates who are accepted for postgraduate studies by several Universities, both in Greece and abroad.
2. Exceptionally large number of research programmes accompanied by high rates of external funding at the Department, resulting in the Department being equipped with updated research equipment, in order to support its educational and research activities.

3. Improved organization, both at curriculum level and administration level, so as to provide high-level services.

The Department has modern, flexible and effective curriculums, which tries to cover the subjects taught and provide knowledge leading to a better educational outcome for the graduates. Nowadays, the cornerstone of the European educational policy is mobilization of European educational and socioeconomic factors, with the aim of achieving the evolution of educational systems in Europe, so as to meet the needs of the knowledge economy. In this context, the Department's curriculum was organized in such a way, so as to give its graduates both the specialization required and the possibility of continuous adaptation, so that they are able to meet the ever-increasing needs of the labour market. Studies at the Department have been structured in such a way, so as to meet the requirements of the labour market and the needs of society, and be adapted to the ever-changing methodological and technological tools. Education provided during the five years of studies at the Department aims at cultivating new subjects, in addition to the traditional ones, which are not separated from each other, but rather form a multilevel methodological and thematic combination. Meanwhile, the Department actively contributes to the urgent needs of modern society, associated with primary production, while keeping its high level of knowledge and its public nature.

Updating of the syllabus of undergraduate and postgraduate studies is done on an annual basis, with the aim of incorporating the scientific developments in the syllabus. The capabilities of the curriculum follow the current changes and developments, so as to meet its objectives as much as possible; this is achieved to a large extent, as shown in the results of the present evaluation.

For the complete instruction of students and provision of comparative advantages, the Department has organized its curriculum in such a way, so as to meet the requirements of courses of a pedagogic nature, which ensure the possibility of employment in secondary education, and offers a number of informatics courses, comparable with and equivalent to a European Computer Driving Licence (ECDL). It is to be noted here that all these reforms are done in such a way, so as to maintain the stability of studies at the Department.

Continuous improvement in studies provided at the Department and dedication to the vision of creating a University Department in the service of society require the constant care of both academic staff and students.

On the other hand, apart from the quick pace of recruitment, there is also a quick pace of acquisition of durable equipment. The pace of consolidation of incoming funds is quick, and, in this context, an exemplary fund utilization policy has been applied to the Department. This policy aimed at achieving the rapid research equipment of the Department, using the incoming funds in hierarchical and targeted supplies. Thus, better administration of incoming funds and acquisition of expensive research equipment have become possible. Currently, the Department possesses updated equipment to support high-level research activity and education, through provision of applied knowledge. Nevertheless, the courses taught at the Department require highly specialized, costly equipment and, despite any efforts made so far, there are still shortages.

Use of such equipment is done both for educational and research purposes, and a large number of research projects are exclusively supported by the Department. Indeed, the extent of use of the Department's equipment is highly satisfactory, thus supporting high-level undergraduate and postgraduate studies. There is considerable research activity at the Department and, in recent years, the results of research projects have been announced in multiple national and international conferences, as well as in reputable international journals.

Throughout its operation to date, the Department has managed to achieve a high degree of administrative organization, and provide high-quality services both to its students and its employees. There is also adequacy of laboratories and classrooms, which support the Department's educational and research activities.

The Department has developed relationships with local and regional authorities and organizations, through partnerships of mutual interest. The staff members of the Department hold positions in social and development organizations. Nevertheless, mobility of both students and staff members to other Universities and Institutes abroad is very limited.

However, the Department has not achieved the desirable rates of growth and organization. It is currently faced with a serious problem of lack of technical staff. In addition, despite the significant steps taken so far, in terms of procurement of hardware,

technical and laboratory equipment, and also in terms of infrastructure, we have not yet achieved our goals to the desirable degree, which is considered necessary for improving teaching and research activities at the Department. The Department presents a remarkable research activity. However this research activity is not distributed among the different themes. The unequal distribution of research programmes requires strengthening of the Department in new research areas, so as to promote important disciplines taught at the Department. Besides, the unequal distribution of research programmes to the different sources of financing should concern the Department.

The results of the internal evaluation of the Department lead to a number of conclusions, which require further investigation. It is obvious that there is a lag of the group of core courses in the evaluation by the students, and the Department should take measures to strengthen and promote the necessity of these courses.

Apart from the problems facing the Department, those resulting from its organization form, some problems due to other external factors have also been identified, e.g., admission of students who have graduated from Technical Vocational Lyceums and considerable increase in the number of entrants over the past two years.

The intense overfishing and the continuous degradation of aquatic environment have led the international community in an increasing interest concerning the sustainable management of aquatic resources. In addition, the stability or even the declining in most of the world fisheries together with the increasing demand for fisheries products resulted in an enormous expansion of the aquaculture sector, which still remains the faster sector of food production. The Department of Ichthyology and Aquatic Environment of University of Thessaly aims to deal in a national level with issues such as aquatic environmental management, fisheries and aquaculture, providing updated knowledge and studies. The Department is the only Greek higher education institute with five years of study, which awards a degree (Bachelor's Degree) in the Science of Ichthyology and it was established in the context of covering the increased educational and research requirements in aquatic environmental management, fisheries and aquaculture that are important for national economy. In addition, the increasing international interest regarding the sustainable management of aquatic environment and its products (Common Agricultural Policy - Common Fisheries Policy, Integrated Maritime Policy for the European Union etc.) result in comparable advantages for

Departments with relevant studies such as the Department of Ichthyology and Aquatic Environment and provides great opportunities for research funding and student's career.

On the other hand, the year by year increasing number of entrants, as decided by the Hellenic Ministry of Education, Lifelong Learning and Religious Affairs (ΥΠ.Ε.Π.Θ.) could threaten the future prosperity of career opportunities. In addition, the inadequate financing and downgrading of educational system in general constitute obstacles for further development of the Department.

Table 1 presents the main strengths, weaknesses, opportunities, threats and strategic planning of the Department of Ichthyology and Aquatic Environment.

Table 1. Strengths – Weaknesses – Opportunities – Threats and Strategic planning of the Department of Ichthyology and Aquatic Environment.

<u>Internal Environment – Strengths</u>
<p><u>Department</u></p> <ul style="list-style-type: none">• The Department of Ichthyology and Aquatic Environment is the only Greek higher education institute with five years of study, which awards a degree (Bachelor's Degree) in the Science of Ichthyology• Modern, flexible, and effective Undergraduate Programme of Study with updated curriculum in taught courses• Increasing number of candidates for attending the Postgraduate Programme Study• Increasing number of PhD candidates• Modern departmental objectives, specified in the Official Government Gazette of the Hellenic Republic referring to its establishment• Up-to-date website containing a huge amount of information for staff members, students and visitors• Set up a self-evaluation system of the Department's Postgraduate Programme Study since its establishment• Implementation of a self-evaluation system of the Department's Undergraduate Programme for the academic year 2004-2005• Set up an original and transparent software and database for evaluation of the Department, according to the criteria set by the Hellenic Quality Assurance Agency for Higher Education (HQAA) and its particularities• Interdepartmental interaction in selected courses of pedagogic and operational nature

- Teaching of informatics courses comparable with and equivalent to a European Computer Driving Licence (ECDL)
- Teaching of courses with environmental content for acquisition of the right to prepare Environmental Impact Assessments
- Distinctive role of practical training and diploma thesis, both obligatory for award of the degree
- Establishment of conferences – symposium every three years, on a thematic content corresponding to the Department’s research objectives
- Adequacy of laboratories and classrooms
- Adequacy of Information and Communication Technologies (ICTs)
- Exceptionally high rates of external funding from research projects
- Increasing rate of consolidation of the Department’s inflows
- Large extent of use of the Department’s durable equipment by the academic community
- Large number of publications per staff member every year
- High recognition of research projects carried out by the Department’s staff members
- Wide range cooperation with social, cultural, and other productive organizations
- Participation of the Department’s staff members in Organizations of the private and public sector, assuming an Advisory or Administrative/Executive role
- Active participation of the Department’s research staff in all conferences related to its academic disciplines
- Creation of statutory alumni associations of the undergraduate and postgraduate programmes of study
- Perfect cooperation with the central administration of the University of Thessaly
- Human resources and administrative services meeting the requirements of the Department to a satisfactory degree
- Exceptionally good infrastructure and communal spaces
- Implementation of an exemplary budget management policy in order to cover research and teaching priorities
- Exceptionally high growth rates and independence
- Nomination of personalities of international prestige for the honorary doctorate degree

Students

- A considerable number of students place the Department among their first five choices when filling in the special form for taking part in the Panhellenic Examinations (for entrance into higher education)
- Selection of the Department is not determined by the students' gender or origin (urban, rural, insular etc.)
- Ever-increasing number of entrants at the Department
- Establishment of the institution of Advisor Professor since the academic year 2008-2009, assuming an advisory role in issues related to education, research programming, and vocational counseling
- Establishment of the institution of prerequisite courses starting from the academic year 2008-2009, thus serving learning objectives
- Positive response of the students to the teaching effectiveness of academic staff
- Fairly high average grade of degree
- Mean duration of studies within acceptable limits
- Rational structure and organization of timetable
- Ideal proportion of professors to students
- Adequate placement of students in competitive research programmes
- Good proportion of computers to students
- Dining services in the Department's facilities have been provided during the academic year 2008-2009

Internal Environment – Weaknesses

Department

- Inadequate and insufficient support by the technical staff of the Department's laboratories
- Limited spaces intended for offices of new staff members/technical staff
- Low mobility of staff members and students to institutes and research organizations both in Greece and abroad
- Discontinuity in the content of lectures for postgraduate courses
- Increased number of contract staff according to the Presidential Decree 407/80
- Limited use of e-class or other e-learning means for students

- Small number of core courses taught during the first years of studies by professors
- Lack of adequately equipped amphitheatre
- Low index of suitability, quality, and equipment of the classrooms
- Shortages in laboratory and hardware/technical equipment
- Need for updating the electronic equipment of Computing Laboratories
- Lack of adequately equipped Aquaculture Station (freshwater and seawater) for multiple research and teaching purposes
- Unequal distribution of funds from research programmes between the Department's research themes
- Unequal distribution of sources of financing
- Lack of adequate financing (regular budget)

Students

- A small number of students make the Department their first choice when filling in the special form of Panhellenic Examinations
- Unexpected, undocumented increase in the number of entrants over the past year, through decision of the Hellenic Ministry of Education, Lifelong Learning and Religious Affairs (ΥΠ.Ε.Π.Θ.)
- Large number of entrants who had followed the Technology Direction in their secondary education
- Long mean period for obtaining a Master's Degree
- Necessity of choosing the suitable time during the academic year for carrying out a practical training
- Low performance indicators of the learning objectives of core courses during the first two academic years
- Low student satisfaction from teaching material (notes and books) distributed at the Department
- Low satisfaction from services provided by the section of the University library, located at the School of Agricultural Sciences

External Environment – Opportunities

- Increased requirements on aquatic environmental management, fisheries, aquaculture, and food technology both on research and business level
- Increasing interest of European Union regarding the management of aquatic environment and its products (Common Agricultural Policy - Common Fisheries Policy, Integrated Maritime Policy for the European Union etc.)
- Adoption of international green growth models
- Excellent, up to date, career opportunities
- Recognized professional rights from the Geotechnical Chamber of Greece (ΓΕΩ.Τ.Ε.Ε.)
- Broadening of collaborations with Greek and foreign Universities and Institutions (Erasmus – Leonardo Da Vinci Programmes, proposal submissions with partners, partnership in common scientific shows etc.)
- Utilization of national and international funds for research

External Environment – Threats

- Exaggerated dependence from the Ministry of Education, Lifelong Learning and Religious Affairs (ΥΠ.Ε.Π.Θ.)
- Bureaucracy and extreme postponements regarding the appointments of new scientific, technical and administrative staff (Δ.Ε.Π., Ε.Τ.Ε.Π. & Ε.Ε.ΔΙ.Π.)
- Arbitrariness by ΥΠ.Ε.Π.Θ. in determination of the total number of students permitted to entrance
- Low salaries
- Lack or rewarding quality work
- Officially unrecognised laboratories by ΥΠ.Ε.Π.Θ. as research units
- Inadequate funding and downgrading of educational system in general

Strategic Planning, Perspectives for Improvement and Dealing with Potential Inhibiting Factors

Short-term goals and plans of action

- Utilization of all positive satisfactory indexes
- Enhancement of teaching quality in Undergraduate and Postgraduate Programme of Studies

- Distinct academic goals. Enhancement of the procedures forming the research planning and further improvement of research outputs such as number of publications to Science Citation Index and books
- Creation of a Departmental scientific journal
- Improved administration (implementation of electronic services in secretarial offices)
- Improved students' career opportunities on a governmental decision making.
- Development of stronger collaborations with production, administration, social and cultural organization on a local, regional, national and international level
- Creation of a data base system for undergraduate dissertations and postgraduate thesis.
- Proposal submission for new Postgraduate Programme of Studies
- In common action with the Geotechnical Chamber of Greece (ΓΕΩΤ.Ε.Ε) in order to modernize the Law regarding the profession of ichthyologist
- Enactment and establish stronger relationships with the Alumni Association "ΑΡΕΙΩΝ". Implement actions that improve their professional rights in ΓΕΩΤ.Ε.Ε, public bodies and producer co-operatives
- Establishing monthly meetings with students to enhance dissemination of information and discussion
- Determination of research goals for the staff members (Δ.Ε.Π.)
- Recruitment of new teaching (Ε.Ε.ΔΙ.Π.) and technical staff (Ε.Τ.Ε.Π.)
- Creation of task schedule for the staff who are in contract (Ι.Δ.Α.Χ.)
- Expansion of wireless network in the whole building
- Enhance the mobility of staff to and from other national and international universities and institutions

Medium- and long-term goals and plans of action

- Determination of areas of expertise for the new positions that will be open after the retirement of departmental members
- Operation of Departmental Divisions
- Career monitoring of alumni

Administrative goals and plans of action

- Expansion of the Faculty Building
- Design of the outer area of the Faculty building
- Supply of equipment to the amphitheatre
- Expansion of the Aquaculture Station
- Purchase of a vehicle for research needs
- Purchase of a research vessel
- Maintenance of the Faculty building on a more regular base
- Replanning of interior design in order to meet ergonomic requirements

Goals and plans of action needed from the Government

- New positions for academic staff such as departmental members (Δ.Ε.Π.), technical and administrative staff
- Increase of the annual funding by the Ministry of Education, Lifelong Learning and Religious Affairs (ΥΠ.Ε.Π.Θ.) as well as the Ministry of Rural Development and Food (ΥΠ.Α.Α.Τ.)
- Funding for the establishment of a pioneer aquaculture sea unit that will expand research facilities on a farm level and will satisfy the needs of students' Practise
- Legal and life insurance of departmental members as regarding the risks during field sampling and laboratory work
- Establishment of indexes regarding performance and wages of academic members.
- Establishment of indexes regarding performance and research funding of academic members
- Reallocation of funding towards the teaching needs instead of research
- Expansion of Faculty's duties
- Enactment of budget allocation for the entire Faculty and not separately for each department