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ΑΝΩΤΑΤΗΣ ΕΚΠΑΙΔΕΥΣΗΣ

HELLENIC REPUBLIC
H.Q.A.A.
HELLENIC QUALITY ASSURANCE AGENCY
FOR HIGHER EDUCATION

EXTERNAL EVALUATION REPORT (final report 11-06-2010)

DEPARTMENT | AQUACULTURE AND FISHERIES MANAGEMENT |
UNIVERSITY /TEI | TECHNOLOGICAL EDUCATIONAL INSTITUTE OF MESSOLONGHI |

Version 1.0
November 2008

External Evaluation Committee

The Committee responsible for the External Evaluation of the **DEPARTMENT OF AQUACULTURE AND FISHERIES MANAGEMENT** of the **TECHNOLOGICAL EDUCATIONAL INSTITUTE OF MESSOLONGHI** consisted of the following four (4) expert evaluators drawn from the Registry constituted by the HQAA in accordance with Law 3374/2005 :

1. Prof. Christos Ouzounis _____ (coordinator)
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King's College London, UK/Centre for Research & Technology Hellas, Greece _____
(Institution of origin)

2. Prof. Lászlo Váradi _____
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3. Prof. Manuel Yúfera _____
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4. Dr. Evangelos Dimitriou _____
(Title) (Name and Surname)
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(Institution of origin)

The structure of the “Format” proposed for the External Evaluation Report is dictated by the requirements of Law 3374/2005 and corresponds generally to the structure of the Internal Evaluation Report submitted by the Department.

The length of text in each box is free. Moreover, the various questions may not be answered separately; they only provide a general idea about specific matters that should be addressed by the Committee when formulating its comments.

Introduction

- Dates and brief account of the site visit

Dates of site visit to Messolonghi from Athens were 12-14 April 2010, leaving on 12/4 and returning on 14/4.

On April 12, transport to the Department / Institute was provided, and then a welcome meeting took place with a short briefing by the President of the TEI, followed by an informal dinner.

On April 13, the site visit essentially consisted of a very detailed tour of the laboratories of the Department, with extensive opportunities for discussions and feedback. The External Evaluation Committee (the ‘Committee’) has very much appreciated the extent and timing of this interaction with the teaching and associated staff. There was no clear indication for an overview presentation, and the Committee has felt that this should have been a requirement in the process. However, certain documents deemed essential and requested for the following day, were promptly provided (see below for a detailed list). The size of the Department is such that the scheduled tour has been very detailed and the Committee felt that they have obtained a highly accurate view of the activities, at the research, teaching, training, services and administration levels.

On April 14, the Committee has explored a number of other investigative actions, including visiting landmark sites to understand and appreciate the geography of the locality, followed by detailed discussions with key stakeholders, from public administration officials and trainees (graduates of the Department) to local industry workers, including the lagoon information center, the managing director at the salt factory and entrepreneurs from local fisheries. During the afternoon, an interview with students took place and feedback was recorded, and presented below. Also, a meeting with the administrative team provided insights that are documented in this report.

- Whom did the Committee meet?

On April 12, the Committee has met with the **President and members of the HQAA Center** to discuss the evaluation process.

During the site visit, the Committee was welcomed on April 12 by **senior management**, headed by the president of the TEI, Prof. Vangelis Politis-Stergiou and Profs. George Hotos and I. Kougiass (vice presidents), as prescribed (see Guidelines, first meeting). The Committee later met with members of the Quality Assurance Unit (MODIP), the Head of the Department and the Internal Evaluation Group (IEG).

On April 13, the Committee has met with the **teaching staff** of the Department, namely Profs. George Katselis (head), Konstantinos Batargias (vice head), Charalampos Gnardelis, George Hotos (also vice president of TEI), Pavlos Avramidis, Maria Makri-Seremeti, Vlasoula Bekiari, Dimitrios Moutopoulos, Aikaterini Kribeni.

On April 14, the Committee has met with the **administrative** team of the Department and a class of **students**, during their practical work. The Committee has also met with a number of **stakeholders**, including a number of alumni, key employers and relevant social bodies, local and regional organizations and governmental bodies (as described above).

- Reports, documents, other data examined by the Committee

The following reports and documents were submitted **before** the site visit:

- ✓ Guidelines of the process (Guidelines members EEC.pdf)
- ✓ Internal evaluation criteria (Criteria_Analysis_Messolonghi_Fisheries_ENG.pdf)
- ✓ Internal evaluation report (Internal_Evaluation_Report_Messolonghi_Fisheries£.pdf)
- ✓ Study program (AQUACULTURE & FISHERIES-ODHG_SPOYD_£_2010_Draft.pdf)
- ✓ Student questionnaire (Questionnaires_Messolonghi_Fisheries_£.pdf)
- ✓ List of publications (LIST_OF_PUBLICATIONS_Messolonghi_Fisheries_£.pdf)

£ - substitute for 'ENG' in file name

In addition, the following more documents requested by the Committee **during** the first day of the site visit were also immediately provided:

- ✓ Internal evaluation report (update, in hardcopy, in Greek)
- ✓ Four-year planning 2008-2012 (in hardcopy, in Greek)
- ✓ Skills list for graduates (in hardcopy, in Greek)
- ✓ Vision statement, external projects, indicative budget (YDAD-Aims-Future-budget.doc)
- ✓ A list of staff names, titles, teaching activities (MELH TEI.xls)

· Facilities visited by the External Evaluation Committee

Thanks to a very well-organized schedule, the Committee has had the time to visit all facilities at the Department, including administrative offices, staff office and laboratories, classroom spaces, other facilities and external locations as described above.

GENERAL COMMENTS

As the Committee fully appreciates, this Department is the **oldest** of the TEI Messolonghi and also of its kind nationally, founded in 1981. Later, other similar departments were founded elsewhere, in Igoumenitsa (1995) and Nea Moudania (2001), as well as in Universities across the country.

This situation poses specific **challenges and opportunities** that need to be met, given the Department's extensive experience acquired during the 30 years of its existence. On the one hand, the subject is offered by a number of Universities and Technological Institutes at a national level, increasing competition for student recruitment; on the other hand, it is important to emphasize that the long experience and the privileged locality of the TEI Messolonghi can play a crucial role for its development into a critical component of enormous value for the technology training framework of Greece.

More precisely, the particular characteristics of the region as a **natural laboratory** with an immense environmental and heritage value, the critical importance of the **mission** of the Department for the local economy and its **position** in proximity to major cities can (and should) be turned into a **strategic advantage**, to maximize its role on the local, regional and national economy and the corresponding skills markets.

A. Curriculum and Teaching

To be filled separately for each undergraduate, graduate and doctoral programme.

A1. Curriculum

APPROACH

- What are the goals and objectives of the curriculum? What is the plan for achieving them?

The Committee felt that the goals and objectives of the curriculum are **well-articulated**. The breadth and range of topics are substantial and the skills that need to be achieved for the graduates of the Department have been listed in great detail and appear to be well-understood, as indicated by the document describing the results of a study conducted within the programme WAVE (Working in Aquaculture-Validation of Experience - 2006).

- How were the objectives decided? Which factors were taken into account? Were they set against appropriate benchmarks? Did the unit consult other stakeholders?

The objectives for the curriculum have been decided on the basis of the Department's mission, the expertise of the teaching staff and corresponding appointments as well as the general capabilities of the Department in terms of physical and research infrastructure. Evidently, the Department staff are **fully aware of the objectives**, as demonstrated by the WAVE programme. More emphasis on local stakeholders and the relevant industry must be given, as detailed elsewhere in this report.

- Is the curriculum consistent with the unit's objectives and the requirements of the society?

In general, the Committee felt that the curriculum is consistent with the Department's objectives, however **more effort** should be directed towards the corresponding requirements of the society (e.g. local industries).

- How was the curriculum decided? Has the unit set a procedure for the revision of the curriculum?

The Committee understands that the curriculum has been **evolving and adapting** over the years, which is a positive element in its development. The Department sets the curriculum through internal procedures (e.g. Program of Studies Committee, feedback from the General Assembly).

IMPLEMENTATION

- How effectively is the curriculum implemented?

The structure and content of the curriculum appears to be implemented **very effectively**.

- Is the structure of the curriculum realistic?

The structure of the curriculum is **realistic**. Certain difficulties with supervision of students have been identified in the Internal Evaluation Report ('Internal Report'), mostly related to workload and a certain lack for financial allowance of travel expenses. However, the Committee feels that these reasons cannot justify that such issues are not sufficiently critical to impede essential activities such as field training, extensively discussed in this report.

- Is the curriculum coherent and functional?

The Committee agreed that the curriculum is **coherent and functional** - see General Comments for more information regarding future developments.

- Is the course material coordinated?

The course material is coordinated sufficiently well, as reflected by the **breadth and depth** of the activities of the teaching and associated staff, and the good mix of mandatory and optional courses provided.

- Are there necessary resources and appropriately trained staff to implement the curriculum?
In general, there are enough physical (space & equipment) **resources** and appropriately trained **staff** to implement the curriculum successfully. Certain difficulties with teaching rooms and technical issues (presentation facilities, heating/cooling) were identified in the Internal Report, that should be solved.

RESULTS

- How well is the implementation achieving the planned approach?
The implementation of the curriculum is achieving the planned approach and the mission of the Department **very successfully**, despite (mostly operational) difficulties as described elsewhere.
- If not, why is it so? How is this problem dealt with?
If some technicalities are addressed, the implementation is well **on track** to achieve the Department's teaching objectives.
- Does the Department understand why and how it achieved those particular results?
The Department's staff **fully appreciate** and understand how they have achieved the results related to teaching and supervision of student projects.

IMPROVEMENT (use of the self-evaluation conclusions)

- Does the academic unit know how it can improve?
Despite the fact that there was little material in the Internal Report with regard to 'conclusions', the Committee appreciated the honest and forwarding manner with which the Department provided all the information necessary for the evaluation process. Clearly, there are areas for **further improvement**, outlined in the last sections (D and E) of this report.
- What initiatives does it take in this direction?
The Committee was provided with a '**vision statement**' for the future development of the Department in the years 2008-2012. Better connections with local industry, the social role of the Department, student recruitment, the development of postgraduate programs, expansion of teaching staff, the further development of research infrastructure and external fundraising activities were some of the key general issues identified in this statement.

GENERAL COMMENTS

The Committee felt that the curriculum is **well-organized**, with a significant value for the students' success in the professional markets as middle managers in the field, despite certain shortcomings outlined above and in the last section of this report. The Department's efforts to address critical issues and sustain future development should be appreciated.

The Department takes part in **three postgraduate programs** according to the following: (1) "Sustainable Management of Aquatic Environment" in partnership with the Department of Agronomy, Ichthyology and Water Resources of the University of Thessaly for four years; (2) "Fish Nutrition" in collaboration with the Agricultural University of Athens (TEI of Messolonghi organized and carried out autonomously a module named "Lagoons"); and (3) "Aquaculture – Pathological problems of farmed aquatic organism species" in partnership with the Department of Aquaculture and Fisheries of the TEI of Epirus.

The Committee found the involvement of TEI Messolonghi “absolutely satisfactory” that reinforces the Department’s self-reliance. This involvement should be maintained and developed, and **eventually** could become a springboard for the establishment of autonomous Postgraduate Programs of Studies at the Department of Aquaculture and Fisheries.

The Committee agrees with this finding, yet they recommend that this goal should **not redirect efforts from the primary mission** for undergraduate teaching and any proposed restructuring steps towards a technological education institution. The organization of autonomous Postgraduate Programs at the Department could be a really great opportunity to utilize the valuable teaching resources for the benefit for fisheries and aquaculture development of the region. It should be noted however, that the future postgraduate courses should be focused taking into account the strengths and comparative advantages of the Department.

Furthermore, it should be noted that one element of immediate improvement with regard to the curriculum but also pertinent to teaching practices (and therefore to the relevance for stakeholders, e.g. future employers) was the clear need for **more fieldwork**. In addition, apart from fieldwork, **real-world practice** in hatchery techniques, for example the use of large tanks and common methods used in companies and commercial hatcheries was deemed essential by the Committee.

Certain disciplines, and more specifically taxonomy, do not appear to be up-to-date and more effort should be made for the application of modern molecular taxonomy in the field.

From feedback obtained from (admittedly, a non-representative sample of) alumni of the Department, it was clear that most teachers are indeed excellent; no difference could be sensed by those graduates between permanent and associated teaching staff, which is a very positive sign. A desire for more IT and accounting in the curriculum was identified in multiple occasions, material that could be provided by **other Departments** of the TEI Messolonghi (see general comments below, in this section).

A2. Teaching

APPROACH: Please comment on :

- Teaching methods

The teaching methods are mostly **appropriate**, based on long experience of the teaching staff.

- Teaching staff-student ratio

The teaching-staff student ratio is **very favorable** (~1/10-1/15), given the number of students. Needs for teaching staff expansion is mostly related to the ambitious and broad curriculum provided, and should be seen as a strength of the Department.

- Teacher-student collaboration

Teachers do post their office hours for their availability of liaising with students, although it is reported that students do not make much use of this opportunity. More effort is necessary to achieve a closer collaboration, by extending office hours and general presence at the site, since the small size of the Department/Institute should in principle facilitate this. It should be noted, however, that this is a general pattern pertaining in institutions across Europe and **not specific** to the Department under consideration.

- Adequacy of means and resources

Very good.

- Use of information technologies

The availability of information technologies is **more than adequate**, exemplified by extensive use of the internet, library resources and presentation facilities, by the staff. More emphasis is recommended for the use of IT by students, in day-to-day teaching, practicals and dissertation work.

- Examination system

There are **multiple** student assessment methods, according to the Internal Report, including progress assessment, homework projects and exercises and regular tests. A need for an evaluation procedure of the examination process was identified and could be implemented relatively easily, minimally based on feedback from students. Clear criteria for the assessment of the dissertation project are in place. A European Credit Transfer System (ECTS) is also in place. Given, however, the high failure rates of students in exams and graduation, the Committee suggests a possible re-formulation of parts of the teaching material, in case these do not correspond to the background and interests of students; this remark does not in any way encourage a drop of quality but a re-orientation towards the technological nature of the field.

IMPLEMENTATION

- Quality of teaching procedures

The Committee established that the quality of teaching is **generally high**, and in accordance to international standards. This element of the Department should be fully appreciated in a wider context, including the State and future employers of the Department's graduates.

- Quality and adequacy of teaching materials and resources

Excellent. Average teaching hours for all faculty members at 14.3 hrs/week seems to be reasonable.

- Quality of course material. Is it brought up to date?

The quality of the course material is **generally high**, with a few exceptions identified. Based on student feedback, the Committee recommends that every effort should be made so that the quality of the course material (notes, printouts) should be improved in order to reflect the quality of the coursework content (i.e. mostly a presentation issue). One other relatively minor issue (related to management) is that the practical course assignments are decided too early, so that students do not always make the most appropriate decisions. This could be easily amended by offering students the option to switch to other courses within a certain period.

- Linking of research with teaching

The links of research with teaching seem to be **good**. Although the Committee fully appreciates the difficulty to maintain this balance, there was no such issue brought up either by teaching staff or students. A clear need and desire from students for **more fieldwork** was one element in this discussion, a theme addressed throughout this report. Moreover, it is deemed critical to engage laboratories as well as teaching and associated staff with the most relevant research activities, so that the quality of teaching and training is supported.

- Mobility of academic staff and students

As documented in the Internal Report, there is little participation of teachers from abroad. With a slight re-adjustment of the core funding/regular budget, some **external speakers** could be invited, including stakeholders from local industries. The Department participates in the ERASMUS and LEONARDO programs - this should be maintained and fully exploited. Again, as documented in the Internal Report, bilateral agreements with Institutions and Stakeholders abroad should be sought, in relation with the uniqueness of the ecosystems around the TEI Messolonghi/Department as a major attraction from colleagues, a move that would definitely increase both the visibility and potential of the Department's ambitions on an international stage, **for example** by arranging mutual exchange programs, short courses and visits for staff and students.

- Evaluation of teaching by students

The teaching quality is **monitored** by student questionnaires, a process established recently.

RESULTS

- Efficacy of teaching

A good assortment of teaching methods is applied, including class and lab teaching, lab practicals, literature reviews, project presentations related to both theory and practice, site visits. Based on feedback from students, a clear need for **more frequent field trips** was identified - for example, 2-3 day trips / year. Also, the Committee felt that more opportunities should be provided on a **cross-departmental basis**, related to courses such as IT/accounting, PR/marketing or project/business management, to prepare the graduates for employment in industry.

- How are discrepancies in the success/failure percentage between courses justified?

The average grade for graduates is 6.51/10 in the last decade or so. More efforts should be made to **increase** this value, by encouraging students to graduate in a timely fashion.

- How are differences in time of study completion and in degree grades justified?

The general distribution of grades appears to be **reasonable**, on a 20/60/20% distribution for grade ranges of 5.0-5.9/6.0-6.9/7.0-8.4, respectively. As mentioned above, students should be encouraged to graduate in a timely fashion, in collaboration with teaching staff who should clearly understand that this factor reflects the quality of the Department's effectiveness.

- Does the Department realize the reasons of such positive or negative results?

The Department should place more emphasis on successful graduation rates, in order to improve both their **efficiency** with regard to teaching and **release use of resources** for more successful activities elsewhere (research, services, outreach).

IMPROVEMENTS

- Does the Department propose methods and ways for improvement?

The Department **understands** that one of their main objectives is to attract high-quality students and every effort towards this direction should be made, especially within the context of recent proposed changes by the government regarding entrance exams in higher education.

- What initiatives does it take in this direction?

Curricula are posted on the web (via the Teachweb, Studweb and e-Class services) and relevant announcements are also posted on notice boards. **Advertisement** of the course is made via the Department's website and additional printed material. The Committee recommends that other, more imaginative initiatives must be undertaken, **for example** the coordination of conferences, exchange visits, participation in other projects (e.g. eco-tourism) etc.

GENERAL COMMENTS

In general, the Committee has appreciated that both the coursework content and teaching practices are of **very high standard**.

Although the Committee did not have a chance to visit the various Departments of the Institute, and to collect additional information on their activities, based on information gained from the internet and provided by the President of TEI Messolonghi, the Committee believes that valuable training capacities and a substantial knowledge base are **already available across the Institute** that could be readily utilized for the sustainable use of resources for food production and for the improvement of livelihood in coastal areas, for example as optional cross-departmental courses.

The needs for such services from the Institute were clearly seen by the Committee during the discussions with stakeholders (alumni, staff of regional administration, fishermen). The exploitation of the available resources of the Institute however requires concerted efforts and **coordination** within and between Departments.

The needs for a **more integrated and multi-disciplinary approach** is increasing as problems in aquaculture and fisheries development and generally in the use of natural resources are getting more complex. This trend is valid also for teaching, that has been recognized by the management of the Institute. However, further efforts seem to be required for integrating the activities of the various Departments (that presently work rather individually) into a complex functional system at the institutional level, that provides an appropriate framework for the implementation of multi-disciplinary teaching/training programs and various services according to a well defined strategy.

B. Research

For each particular matter, please distinguish between under- and post-graduate level, if necessary.

APPROACH

- What is the Department's main objective in research?

The Department is **active** in a number of research projects, typically linked to the teaching programme, with specific applications in fish biology, fisheries management and aquaculture methodologies, in accord with the Department's mission.

- How does the Department promote research?

Research in the Department is mostly promoted by **core funding**, in relation to equipment purchases as well as individual efforts by the staff to obtain competitive funding from national and international agencies. The Committee has found that in general there is sufficient support from the Department towards research, however a more coordinated approach should be considered, following a **research policy** that can be formulated more precisely and with incentives that should be provided in the future, as properly acknowledged in the Internal Report.

- Quality and adequacy of research infrastructure

The Committee has found that the statement in the Internal Report is valid with respect to the **quality and adequacy of research infrastructure**. It is recognized that large investments have been made towards the purchase of specialized laboratory equipment and resources, in order to support research and training. In addition, the research vessel OCEANIS should become an invaluable asset both for research/training purposes as well as an in-kind contribution for the raising of external funds.

IMPLEMENTATION

- Scientific publications

The Department has published a number of **very interesting publications** in prestigious journals in the field, including Aquaculture, Aquaculture Nutrition, Aquaculture Research, Fisheries Research, Estuarine Coastal and Shelf Science, Marine Ecology Progress Series, Marine Biology and others. The Committee has identified, however, a number of publications that are not directly relevant to the field of study. The number of citations is adequate but can definitely be improved, possibly by redirecting knowledge dissemination efforts to less, and higher-impact strategic publications.

- Research projects

From the list of projects that were provided, the Committee feels that the scope of research in the past ten years has concentrated mostly on applied research activities and external projects of relevance and in accord with the Department's mission. Internally funded projects are also carried out by individual staff, in collaboration with other institutions. Although the importance of both the externally and internally funded projects is crucial in order to promote innovation and maintain high standards for the teaching and training activities of students, it is evident that a better coordination and consolidation of research activities can enhance significantly the profile of the Department and attract **more competitive funding** from other, untapped sources.

- Research collaborations

There are a number of active academic research collaborations with University departments, for example the University of Patras and the University of Ioannina. As acknowledged in the Internal Report, more effort should be given to the **establishment of partnerships** for applied research with social interest groups and businesses/stakeholders in the local industry. As the Department forges a more targeted research strategy over the next few years, the

confidence to expand the collaboration scope in other areas of relevance and perhaps on an international scene is expected to amplify the intensity of collaborative projects of the Department.

RESULTS

- How successfully were the Department's research objectives implemented?

Despite some successful individual research activities and a generally mixed picture, the Committee agrees that an overall research objective and development plan, by integrating the different disciplines of the Department in a more **coherent and effective** strategy, is still lacking. Indeed, the potential for this effort is excellent if attention is concentrated in areas of strength and the advantage of field studies in the unique local environment.

- Is the department's research acknowledged and visible outside the Department?

The Department's research is acknowledged at a national level by a number of studies and existing collaborations. As acknowledged, more work should be carried out to establish more projects on a European level by exploiting the particular locale and contributing the unique value of the surrounding ecosystems and the multitude of intensive aquaculture commercial facilities to wider studies. The Committee also strongly recommends that the Department makes an effort to **brand themselves** as a more identifiable entity with the persistent and consistent use of a successful (existing or new) acronym (both in Greek and English) that reflects the Institute/Department's official titles. This acronym can also be used in conference announcements.

IMPROVEMENT

- Improvements in research proposed by the Department, if necessary

As mentioned above, a more concerted effort for an integrated research strategy is necessary to achieve international recognition for fewer, more intensive areas of research. The potential of human resources and research infrastructure are **significant and sub-optimally used** at the moment, especially in view of the fact that the local context is of unique value at a European and international level. The Committee encourages every effort towards the establishment of a set of high-priority areas and collaboration with stronger research groups across the country.

- Initiatives undertaken in this direction

Visibility can be established by **a number of means**. Participation of the Department in the AquaMedit 2010 conference was deemed valuable and similar efforts should be amplified, with an ambition to maintain the momentum of attracting national and international communities to the area. The organization of a local stakeholders' meeting is another proposition, with the aim to understand better the needs of the local economy and enhance the interaction of the research/teaching/training activities of the Department with applications-driven development for the area at a regional and national levels.

GENERAL COMMENTS

Even though conducting research is not a primary mission of a TEI, high quality teaching should be linked with applied research, a fact **well recognized** by the Department.

Research work of the Department however should be focused on topics that are most relevant to the **socio-economic realities of the region**, where fisheries and extensive aquaculture in coastal lagoons has an important role in rural economy and livelihood. There is a significant need for research related to integrated coastal zone management, the development of integrated aquaculture (e.g. Integrated Multi Trophic Aquaculture, IMTA), fisheries based aquaculture and multi-functional aquaculture.

The Messolonghi area, with its lagoons, fisheries and aquaculture related facilities has **excellent potential** for conducting such research programs, whose results could be applied by other regions with similar hydro-geological and socio-economic conditions.

Finally, **competitive funding** from external sources, including the EC's Framework Programmes, should be sought, first by gaining experience from collaborators, and later by actively competing for expanding to a wider context. The **research infrastructure** can be very useful in this context, contributing substantial physical and human resources to research and training networks, as well as formulating a services sector for public and private sectors.

C. All Other Services

For each particular matter, please distinguish between under- and post-graduate level, if necessary.

APPROACH

- How does the Department view the various services provided to the members of the academic community (teaching staff, students)

The Committee commends the Department's efforts to provide a number of services either specific to the Department or with a broader impact within the TEI Messolonghi. The Department is making every effort to maintain a **high level of service provision** to teaching staff and students, as it was apparent both from the Internal Report and the site visit.

IMPLEMENTATION

- Organization and infrastructure of the Department's administration (e.g. secretariat of the Department)

The secretariat of the Department is **adequately staffed**, with 1 full-time person and 2 part-time people. Needs for an additional full-time person were expressed.

- Form and function of academic services and infrastructure for students (e.g. library, PCs and free internet access, student counseling, athletic-cultural activity etc.)

The Department (within the TEI Messolonghi framework) provides a number of **excellent services** to students, including library services through the HEAL LINK system, PCs and internet access, foreign language courses (English, French, German, Italian), etc.

- Collaboration with social, cultural and production organizations

There is a continuing effort to engage with **local stakeholders**, including social, cultural and production organizations. The Committee encourages this effort and feels that should be greatly amplified, in order for the Department to achieve its main objectives.

RESULTS

- Are administrative and other services adequate and functional?

Yes.

- How does the Department view the particular results

Working hours for administrative staff do not include afternoon hours, as identified in the Internal Report, a detail that might have an effect on the Department's performance. All other services have been deemed **adequate**.

IMPROVEMENTS

- Has the Department identified ways and methods to improve the services provided?

Based on both the Internal Report and feedback from students, one element of immediate improvement has been identified with regard to a smooth introduction for new students. A more streamlined process must be put in place as an **orientation session** at the beginning of the academic year, which will most likely have a profound impact on student performance later.

- Initiatives undertaken in this direction

The Department benefits greatly from free boarding and accommodation facilities offered by the TEI Messolonghi, a great asset in its future course to attract visitors and exchange students. The Committee requested and obtained an indicative budget for core funding (~800K€/yr): it was realized that a **slight re-adjustment** of this budget in favor of certain recommendations, for example field trips or invited speakers (currently underfunded) - possibly at the expense of

an already impressive research infrastructure that was wisely put in place in the previous years, might be a reasonable option to implement the Department's strategy in a cost-neutral manner.

GENERAL COMMENTS

In general, services provision by the Department is **very good**, including administrative, IT and student welfare. A need for a better process with regard to resource allocation has been identified.

The Department maintains **excellent relationships** with other levels of education (i.e. primary and secondary) in both the Aitolokarnania Prefecture (where the TEI is located) and beyond (e.g. Achaia Prefecture). There are guided tours to the Department quite often when brief information lectures are given to visitors as well. Municipalities express their interest in collaboration with the Department (e.g. consultancies, environment monitoring services, involvement in the elaboration and implementation of regional development plans).

The importance of a more active collaboration with stakeholders in the region have been recognized by the leaders of the Department and the Committee would like to encourage the Department to explore these opportunities to the maximum degree possible. **Stakeholder communication** is an increasingly important element for the socio-economic development in a particular region and the Department can arguably play a key role in this process.

The Department was established in a region where fisheries and extensive aquaculture has a long tradition and contribute significantly to the fish supply at the national level. The relatively remote location of the Institute may be a constraint but at the same time an opportunity, if activities are **properly integrated** into the social fabric of the region and the local economy.

D. Strategic planning, perspectives for improvement and potential inhibiting factors

For each particular matter, please distinguish between under- and post-graduate level, if necessary.

- Short-, medium- and long-term goals

Despite the fact that in the initial Internal Report there was no specific development plan, the Committee was later provided with such as report for the years **2008-2012**, a very positive outcome of the evaluation process. In addition, the Committee has requested and was provided with a 'vision statement', whose main points were summarized above (in section A1) - as below:

"The Committee was provided with a 'vision statement' for the future development of the Department in the years 2008-2012. Better connections with local industry, the social role of the Department, student recruitment, the development of postgraduate programs, expansion of teaching staff, the further development of research infrastructure and external fundraising activities were some of the key general issues identified in this statement".

- Strategies, programming and actions

In these difficult times for science, research and education, it is important not to be complacent. A more **pro-active strategy** for **fundraising**, **service provision** and **social relevance** is necessary, not only for the Department under consideration, but for all similar institutions and units across Europe. A **monitoring system** for a proper action plan should be put in place (as it is admitted in the Internal Report), in order for the Department to flourish again based on its key strengths. Indicators for a successful development plan can include, as everywhere else, the impact on training/teaching, student success rates, external funding, income from services, citations and impact as well as social actions with regard to public or private stakeholders.

- Potential inhibiting factors at state, institutional and departmental level

Following discussions with senior management, the Committee understands that there is a certain **vagueness** with regard to the development of the TEI institution in Greece. There is a clear mandate for undergraduate teaching and vocational training, which is of immense value for the growth of local economies, yet there is also a stream of thinking for the further establishment of TEIs on a par with Universities, closer to the notion of Technical Universities providing advanced degrees. While this uncertainty looms, it is important to focus on the particular **strengths** of a Department or Institution as a whole and explore opportunities as they arise.

GENERAL COMMENTS

The Committee has deemed necessary to comment on the relations with Social Interest Groups/Cultural Operators/Businesses and other Stakeholders (**SIGCOBS**) **in this section**. From the Internal Report, it is evident that in the last five years, there have been a few collaborations with various social groups. From the data presented and the discussions with local groups, there are three conclusions that can be presented.

First, the Department is not overwhelmingly active in the area and the local economy. This could be readily achieved by **re-organizing** parts of the teaching/training as well as research processes outside the Department's quarters. This activity, apart from being an essential component for the achievement of the Department's mission, would also form the basis for the development of **collaborations** with the public and private sectors in relevant subjects, e.g. fishing cooperatives or organizations.

Second, in the few collaborations that took place, only few staff and students (less than 7 persons/year) have participated, indicative of the fact that this process can be **further amplified** since it does not currently have the expected positive impact on the quality of the teaching programme of the Department.

Third, as it is apparent elsewhere in the Internal Report, various issues are sometimes delegated to the development of organizational structures, while a far more constructive approach could be **revising the strategy, the priorities and the identity** of the Department towards more applied, more collective and more focused activities for the development of technical skills and relevant knowledge.

A number of findings derived from interviews with local fishermen relate to the **incalculable value** of the industry for the country, which is somewhat neglected in general and requires strong support from the state. The Committee has appreciated the insightful comments of fishing professionals, their respect of the environment and their deeper understanding of their trade as a factor for both economic development and environmental sustainability, of immense value for Greece. Their expertise is mostly from extensive aquaculture and could potentially contribute to the Department's teaching activities in seminars. Needs for better (traditional) fishing gears and fishery management were identified. In a more general context, needs for both **environmental management** and also **law/policy enforcement** were clearly acute and the fishing professionals would appreciate any progress at those fronts, ambitions currently beyond their professional remit and collective capabilities. **Other elements**, not specific to the area, are connected with state support with regard to natural disasters, the lack of an organized fish market, the structure of the local trade, the need of food processing strategies with local character, etc. Similarly, there appears to be little contact with the main industry players and outreach activities for the support of research projects of local interest. Graduates of the Department, however, have acquired roles in the local government, for instance the Department of Fisheries.

E. Conclusions

For each particular matter, please distinguish between under- and post-graduate level, if necessary.

- Conclusions of the E.E.C. and recommendations on:
- (a) the development of the Department to this date
- (b) the Department's quality assurance

In general, the Committee appreciated the breadth and depth of the Department's activities and its substantial potential to play a key role not only in the **training** of future professionals in the field as entrepreneurs or managers, but also in the acceleration of the local **economy**. Key recommendations for the development of the Department towards achieving the above goals are listed below.

GENERAL RECOMMENDATIONS

with regard to: TEACHING

- 1 | The Department should make every effort to (i) focus on its primary **mission**, with vocational training activities and (ii) augment its **relevance** to the wider economy, anticipating future developments for the possible re-orientation of the TEI institution as a Technical University.
- 2 | Emphasis should be given on **integrated teaching**, with more field training, enhanced student mobility, the instigation of short (possibly advanced) courses, and new courses on management, etc. as above.
- 3 | A better **staff development plan** should be formed, encouraging staff mobility, exploiting the multi-disciplinary nature of the Institute, and promoting cross-departmental collaboration, initially in the form of seminars, for instance.
- 4 | Students should be **motivated and supported** to graduate on time and with higher grades, without of course sacrificing the quality of teaching, by closer teacher-student collaboration and a continuous adaptation of the teaching material to future needs.

with regard to: RESEARCH

- 5 | A more coherent **research strategy**, with a coordinated research policy, expansion of field studies and a more focused agenda and direction are evidently highly desirable.

6 | **Collaborations** with academic departments in Greece and abroad should be nurtured, along with strategic **partnerships** with academia and industry beyond the existing ones, as a means to attract competitive funding and increase the presence of the Department on an international scene.

7 | Every effort should be made to increase **visibility** by establishing and amplifying a brand (e.g. acronym, an annual conference, etc.) and organize meetings such as short courses, workshops, or symposia.

8 | During the past years, significant investments have been made on existing facilities, therefore - where possible - strategic decisions should focus on improving the **existing infrastructures** and not diluting efforts towards new developments.

with regard to: SERVICES

9 | The Department's **core funding** might be restructured and re-distributed according to the above recommendations, for instance more outreach activities (seminars, meetings) and less investment on instrumentation - where possible.

10 | The existing infrastructures could be used more efficiently for comprehensive teaching and integrated research, always with a view towards the **provision of services** for local and national industries.

11 | A crucial element in this endeavor is **stakeholder communication and participation**, which will provide strong support for the further development of the Department as a local engine of growth.

12 | Finally, an atmosphere of openness, cross-disciplinary research, support of junior researchers and participation of students in all activities can enhance **the role of the Department on the social fabric of this unique region**.

The Department's **quality assurance policy** on a number of fronts, as described in detail throughout this report, is sufficiently well developed. Outstanding issues that need to be addressed have been analyzed in depth and summarized above as general recommendations.

FINAL REMARKS

It should be emphasized that the Department is staffed by a number of very capable younger scientists recruited in recent years. This group of junior staff can form a **nucleus of excellence** that should be further supported provided that: (i) everyone adopts positive elements from this group and builds experience from active research towards an average level of acceptable quality; if this is not implemented, the gap between research-active and research-inactive staff will widen with grave impact on the quality of studies - (ii) as mentioned above, a more focused strategy for relevant research should be implemented, possibly towards a more applied and technological direction.

The Internal Report clearly demonstrates that the strategy and a potential ambition of the Department/Institute is to take a direction towards a Technical University status. It is evident from both the documentation and the verbal feedback that the Department's association with fishing professionals as well as relevant entrepreneurs is not sufficiently developed. However, the specialized nature of the Department's remit can be considered as a **crucial advantage** and should not redirect attention towards the future 'attractiveness' of the Study Programme by expanding on other subjects e.g. biology, oceanography or statistics. The Committee strongly believes that the technological and not the academic nature of the Department is its **greatest asset** and a competitive advantage on the national and international scene.

The Department has a number of buildings and facilities that cover the needs for teaching and research adequately, and can support future expansion with a more reasonable use of space. The more pressing need is the development of **infrastructures in the locality** to support field studies and field training. The advantage of the surrounding area and its uniqueness, as mentioned repeatedly, should be realized to the fullest, and emphasis should be given on hiring new staff with experience from industry and an expectation to contribute towards the re-orientation of studies with a more applied and relevant nature.

Every effort should be made so that any study, research project or collaboration should contribute towards upgrading and enhancing the educational process and realizing the potential of the

Department in its area. Towards this end, the leadership of the Institute can play a pivotal role, encouraging or enforcing the participation of laboratories with expertise on areas of the most **research-active staff who engage in relevant actions**.

As stated elsewhere, the **instigation of graduate study programmes** by the Department can only take place once other objectives are met and without affecting the quality and completeness of its current mission. However, advanced short courses, seminars and workshops towards achieving the necessary experience towards a graduate study programme should be considered.

The Members of the Committee

Name and Surname	Signature
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