



AQUA-TNET

Meeting minutes

WP1 / WP3 Meeting: Internationalising Aquaculture and Fisheries Degree Programs in Europe: Practical solutions to enhance collaboration

18-19 September 2006

Participant list:

Name	Institution	WP
Maarten Raes	Ghent University, Belgium	1
Antanas Kontautas	Klaipeda University, Lithuania	1
Axel Miller	Scottish Association for Marine Science, UK	1
Bjarni Kristofer Kristjansson	Hólar University College, Iceland	1
Jan Petter Myklebust	University of Bergen, Norway	1
Karin Pittman	University of Bergen, Norway	1
Lucian Oprea	"Dunarea de Jos" University of Galati, Romania	1
Maria Messina	University of Udine, Italy	1
Sofia Galinou-Mitsoudi	Technological Educational Institute of Thessaloniki, Greece	1
Victor Cristea	"Dunarea de Jos" University of Galati, Romania	1
Antoine Siquin	University of Maribor, Slovenia	3
Belgin Hossu	Ege University, Turkey	3
Elin Kjorsvik	Norwegian University of Science and Technology, Norway	3
Gavin Burnell	University College Cork, Ireland	3
Ibrahim Okumus	Karadeniz Technical University, Turkey	3
David Benhaim	Marine Sciences and Techniques Institute, France	3
Margaret Eleftheriou	Aqualex Multimedia Consortium, Ireland	3
Margarida Castro	Algarve University - Portugal	3
Odd-Ivar Lekang	Norwegian University of Live Sciences, Norway	3
Peter Bossier	Ghent University, Belgium	3
Simon Davies	University of Plymouth, UK	3
Yngvar Olsen	Norwegian University of Science and Technology, Norway	3
Bart van Delsen	Ghent University, Belgium	secretariat
Marieke Reuver	AquaTT, Ireland	secretariat

Monday 18th September:

Plenary session – AQUA-TNET objectives

Introduction by Jan Petter Myklebust, Deputy Director of the Department of Research Management & Director International Relations at the University of Bergen, who helped writing the original application for AQUA-TNET2005-08.

Welcome by Prof. J. Giske, Department of Biology, University of Bergen. He gives some background about Norway and the University of Bergen in particular. Major export products of Norway are oil, aquaculture and fisheries. Prof J. Giske stresses the importance of internationalisation. Six out of 16



research groups at the Biology Department of Bergen University are dealing with aquaculture, 6 others are dealing with marine science.

Introductions

All meeting participants introduce themselves and give background about their departments/institutions and their activities in national and international cooperation between universities/campuses.

Far-reaching international and national cooperation between universities/campuses already exists within Nordic Countries (NOVA network) and SAMS (Dr. Miller).

Presentation: AQUA-TNET: History and overview of current network By Margaret Eleftheriou

AQUA-TNET was set up in 1996 with strategic aim: "...higher education forum to assess, compare and analyse the current state of the tertiary sector in Europe and to identify key curriculum development and assessment objectives, ultimately leading to the dissemination of best practice and a more open, transparent and innovative system of education.

Timeline:

1. '96 – '98: AQUA-TNET formed by AquaTT
2. '98 – '01: AQUA-TNET merged with Demeter to form AFA-NET (Agriculture, Forestry and Aquaculture Thematic Network)
3. '01 – '03: 2nd funding period of AFA-NET (AQUA-TNET Work package)
4. '04: Dissemination Year
5. '04: AFA-NET application for further funding (unsuccessful)
6. '05: AQUA-TNET application for larger network

Past Deliverables:

- Design of High Level Short Training Courses (Aqualabs)
- White Paper on Education & Training
- Online Education Database of Tertiary Courses
- Diploma Supplement Reports

AQUA-TNET before 2005 is a success story as it delivered very useful results, it was a cost effective network, dissemination exercise was beneficial and many initiatives have been generated from the network.

Mrs. Eleftheriou then gives some background and what the developments have been, and are momentarily at European Union level, explaining amongst others Bologna, Copenhagen, Bergen, London – Diploma Supplement and Learning Outcomes.

For further details, please check the PowerPoint presentation that is available at the AQUA-TNET webportal: <http://www.aquatnet.com/index.php/31/bergen-2006/>

Critical point made by the workshop participants: there is not enough communication between the policy makers and the researchers. Some of the proposals (proposed outputs) are just not feasible.

Presentation: Network services & website By Marieke Reuver

AquaTT is responsible for providing services to AQUA-TNET, and a full-time Project administrator is appointed. AquaTT is an international not for profit foundation which provides project management and training services to support the sustainable development of Europe's maritime sector.

Services for network members include dissemination of relevant AQUA-TNET information (Training News and AQUA-TNET newsletters), a mobility platform (www.piscesttjobs.com), the education portal



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www.aquatnet.com, Annual Events for Training in the sector, a forum for dissemination of other initiatives, and Student Events as Aqualabs.

The project website is showed and explained how it can be useful to the partners. The website consists of a public and a private section (login and password will be provided for the AQUA-TNET partners). Public section consists of among others a network overview; latest EU developments; search for (info on) related institutions. Institutional information has to be updated by the people from the partner institutions. In the private section, meeting information, presentations and WP resources and results can be found.

AQUALABS; advanced practical laboratory training for early-stage researchers, is explained: It's a series of 6 short training courses + student workshop. Student acquire new practical skills and critical field work experience (e.g. environment, ethical production, food safety and traceability).

The next AQUA-LAB "early-stage researcher workshop" will be held in Galway, Ireland, 2-4 November 2006 and meeting participants are asked to disseminate this information to their students. Topics covered will include: Industry review and perspectives, Communication skills, social & team building skills, prospective analysis exercises, proposal writing, sourcing funding, technology transfer.

Afternoon Session: WP1 – Masters and Masters of Science curriculum development

In the working group 1 Peter Bossier from Ghent University gave an overview of the work done in WP2: PHD CURRICULUM DEVELOPMENT. He gave the results from the EUA doctorate project 2004/2005 focussing on:

- a) The structure and organisation of doctorate programmes;
- b) Supervision, monitoring and assessment and;
- c) Mobility, the European dimension and Joint degrees.

There is a vast diversity in Europe today on the way doctorate programs are organised, both between disciplines and countries. A particular tendency is that many European countries now are re-organising their doctorate programmes into research/graduate schools. The profile of the doctorate is changing rapidly: These programs are tackling the reality through finding the right balance between research, which remain the core element of doctoral education and the necessary orientation towards a wider labour market.

Bossier also presented the questionnaire that has been drafted to be sent out to all members of the AQUA-TNET investigating the availability of aquaculture doctorate programmes.

Questionnaire 1 directed towards institutes: structure and functioning of PhD curriculum.

Questionnaire 2 towards PhD students.

Questionnaire 3 towards recent post-docs.

TOPICS :

- entrance and application
- examinations
- internal evaluation
- external evaluation
- components (generic and specific courses, writing skills...)
- A1 required to obtain a PhD degree?
- finances

Outcomes will be of interest to the consortium + disseminate the results to the scientific world, industries, and students.



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The working group then discussed differences between doctorate programmes for Norway, Lithuania, Romania, Iceland, UK, Italy, Greece and Belgium - where the participants accounted for the practice in their countries.

Norway: +/- all of the students have an Msc. degree before starting PhD. Old system is without a formal supervisor, but with a mentor – low number of necessary deliverable. New system: depending a lot on funding. The person doing a PhD is not considered a student, but an employee of the funding institution. Moving towards an organised model. Three years. Now, a fourth year is sometimes added to get the 'students' trough. There is a lot of competition for funds between universities (money is given from the government for each PhD student who gets his degree). Post-docs come either from university or from industry.

Lithuania: old system with two separate degrees; now new system.

Romania: only since 2005 they have a BaMa system (cf. Bologna), they have a new system Msc-PhD. 1-1.5 years theory (courses) is first phase of PhD + 1.5-2 years of research (3-5 years). PhD students are either employed by the universities or are working for another institution and come in now and then into the universities for courses etc.

Iceland: 8 institutions. Encouraged to do PhD abroad. Entrance exam or not, depending on supervisor. Post-doc is very limited.

UK: +/- cf. Belgium (but 3 years). Defence is without public. Post-doc: different possibilities.

Italy follows Bologna. Need for 300 credits to finish PhD. Post-docs very individual.

Greece: only universities can give out PhD degrees. Some universities are trying to update their rules of education cf. Bologna.

Universities:

1. master degrees – 2 years (1 theory + 1 research thesis).

2. PhD depends on university and research (3-6 years).

Post-docs very individual.

Belgian system: number of ECTS is explained

Cooperation with the industries.

Industries are looking for people with both a biological and economical background. Industries do not want specialised PhDs. Need for training of PhD-students to get into industries: PhD-students must become aware of their competence and the industries must realise they can really use PhD-students.

Curriculum development; future concerns and opportunities (info needed!!!).

Need for information on:

- how far you are in terms of Bologna: Are you changing your curriculum and how far are you?
- Are there differences between academic and professional msc's?!
- Current situation about joint degrees. How far are you?

+ Questionnaire (cf. Peter Bossier's questionnaire) available on website at the end of the month. Possible to propose other institutes that might be interested in this questionnaire.

Next year (year 2): workshop report + info from above questionnaires. Present the results of year 1. feedback from stakeholders.

Need for updates on what is actually happening with the Msc.

How to do this? What is the situation?

Iceland fits in to the Bologna system.

Italy: need for specialisation in the Master. At the moment, Bachelor and Master are more or less comparable.

Belgium: 5 credits as an option for people who want to go in industry.

Norway: masters in aquaculture technology. Need for a broader master course.

Greece: 4 years normal education: 1 semester of working in companies.

SAMS: collaborative project with Shetland: aquaculture and development.

Lithuania: also more general master's degree course.

Opm. **Romania:** two types of masters: educational (academic) or research (industry). Industry does not require you to have a Master's degree (bachelor is sufficient).



Note Administration: there is no number of contract, no written agreement. This gives problems with getting money from the institutes. And, this might be important because without this written agreement you have no proof to be in this consortium...

Afternoon session, Workpackage 3 – Transparency in teaching and education – TUNING approach
Chair: Gavin Burnell

Discussed are backgrounds participants and what is happening in the countries of each participant regarding to TUNING

- Ibrahim Okumus (Turkey): they just set up intern., not fully aware of the TUNING process yet and course modules are not yet described in terms of Learning Outcomes as recommended in TUNING. TUNING recommendations are not taken into consideration yet. International collaboration: are members of EAS, part of PhD WP2, and work together with Gent University and some other universities
- Belgin Hossu (Turkey): They have Erasmus/Socrates programmes and send Master students to Norwegian aquaculture faculties. Turkish undergraduate programs don't fit in European programs, which is a problem. However, for Masters and PhD programs it is no problem. Turkey is now in the process of adopting the Bologna system.
- Simon Davies (UK): background in fish nutrition, and has always been involved in MSc programmes. Multidisciplinary, with an emphasis on aquaculture; there is an applied aquaculture Master. A new route for PhD courses is taken place because now it will be 4 year in stead of 3 years. PhD students are sitting in with Master classes because in Master Programs generic skills are embedded nowadays.

Generic courses are taken very seriously. After 2 years students have to do a test, until then they are no PhD-student

Every student mixes and matches their own study career, things differ for each student.

- David Benhaim (France): his institution offers vocational training in marine sciences in large sense. Because they have to follow the Bologna process they recently converted it to Bachelor degree. Previously they didn't have Bachelor degree, but now they have the 3+2 system. The French education system was based on modules not on competencies.

Note: It becomes clear during this discussion that there is a definition problem, e.g. what does everybody understand under vocational? It becomes clear that it is very important to define all terms and that it is needed to stick to EU terminology. EU rules have to be applied, in order to make things easier/more clear.

- Antoine Siquin (Slovenia): Bologna is not yet established in Slovenia but they are working on it, and want/wish to develop it.
- Elin Kjorsvik (Norway): Her institution is participating in building programs, she explains the way their MSc and PhD programs are build up:
MSc: 1 year of courses + 1 year thesis is 60 ECTS
PhD: takes 3 years. There are courses specially for PhD students, they are not on MSc level, but more research based. The courses are both specific (e.g. juvenile technology) and generic, but mostly specific.

Teaching is research and science based, more than vocational. Teaching language is English, when required, and language courses are possible. They are interested in more exchange for both students and teachers, because groups are sometimes very small, so better.



- Odd-Ivar Lekang (Norway): Norway accepted the Bologna process, and he explains the different levels:
BSc → 180 ECTS (100-level courses)
MSc → 120 ECTS (400-level courses)
PhD → 3 years, but a 4th year is possible, although then you have to work, e.g. teaching. This is not a requirement of a PhD, but PhD students are used for teaching and lab work. It's a way to keep competent people in the department. In order to be able to do a PhD, you must have a Master

Note: Here, it turns out there is a mobility problem because of how the years are set up, and when they start. In Norway you have a semester system, and courses are not being taught at the same time. Within Norwegian systems it is ok, but to go abroad gives difficulties, just because of this system. In Norway there is the rule: if there is 1 English speaking person, you have to teach in English.

- Margarida Castro (Portugal): the university system over whole Portugal is the same. It is not a requirement to have a Masters, before starting a PhD. This year they started applying the Bologna system: BSc – MSc – PhD: 2 – 3 – 4

Portugal has the semester system, and one semester is 15 weeks, every 5 weeks 2 courses are given. The exam system is complicated because the same subject gives exams 5/6 times a year. This makes it very sensitive to fraude, because a lot of teachers give the same exam over and over again. However, this is only done in the undergraduate system, in the Masters students only have 1 chance.

- Bart van Delsen (Belgium): from 2007 – 2008 they have the BSc – MSc: 2 – 3 system. It is required to have a MSc to do a PhD.
- Margaret Eleftheriou (Greece): The Greek system is very different. 12 years ago the system changed. Bachelor: There is a rotation system; students have 3 subjects of which only 1 is their specialisation. Only after passing all this, you can do MSc, so in Greece very difficult to do a Master. That is why there is a big outflow of students to other EU countries. The Master and PhD programmes in Greece are all in Greek language, so exchange of students is difficult.

Margaret Eleftheriou gives a presentation, and explains and informs participants about TUNING. Also ECVET is being discussed

Undergraduate aquaculture courses are being discussed

Important websites:

TUNING: <http://tuning.unideusto.org/tuningeu>

WAVE: www.waveproject.com

Nordic universities: www.NOVA-university.org

New partner admission is being discussed, forms will be send to new partners.

14:00-17:00 Workshop – Practical solutions in collaborative degree projects. Experiences from Erasmus Mundus, joint degrees and connection to European research agenda on aquaculture and fisheries.

Karin Pittman, professor at the University of Bergen starts, with a presentation about “International cooperation in study programs: a scientist's point of view”, see <http://www.aquatnet.com/index.php/31/bergen-2006/>?. She explains the situation at Bergen University. Students come from NUFU, NORAD, Erasmus, Nordplus, Kvote, bilateral agreements, Marie Curie, BATMARE, NFR, EU. The university has 2 bachelor programs and 12 masters programs. The University follows, and is incorporating, the



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Bologna Agreement. Some problems they experience are: competition for good students and funding (!), in more detail:

1. To attract students
2. Admission and reception: problems with availability of information, individual approach for each student?, tuition fees?
3. Entering study program: problems with coordination of semester programs
4. Institute and programs: interaction student-professor-funding institute-university
5. Organisation: students<scientists<administration<leadership. However, the scientists are the driving force.

BIO Introduction masters course (Bergen): 60 students.

The meeting participants comment on the situation, referring to their own countries, institutions and experiences.

G. Burnell: size matters.

Gavin Burnell from University College Cork in Ireland comments that indeed, in Ireland several Msc. courses have been shut down after 3 years because the number of students was too low.

P. Bossier, professor at Ghent University Belgium: Coordination of exchange of students between universities based on their thesis work. He explains the MAQFISH exchange project. Around 20 students per year are coming in to do a course on aquaculture. Ghent is receiving a lot of exchange students; the experience has been regarded to be very positive by both sides.

SAMS: experiences with the ERASMUS exchange project are shared.

Bergen: Thelma Kraft and Nicolai Mowinckel-Trysnes from the University of Bergen present about "[Experiences from the Joint European Master in Water and Coastal Management](http://www.aquatnet.com/index.php/31/bergen-2006/)", see <http://www.aquatnet.com/index.php/31/bergen-2006/>?. It's a 18 (-24) month project: 1 year taught programme and 6 months research project + thesis. Universities of Algarve, Plymouth, Cadiz and Bergen work together for this joint degree. However, there are national differences between the universities, e.g. duration, cost levels, access to facilities and services, student access, procedures for examination and diplomas.

Experienced problems: no tuition fee in Norway; university systems in general, in all countries, are not flexible enough; many experience problems with administration (for example responsibility is delegated all the time).

Experiences: multidisciplinary perspectives; benefit from different social environments; develop international relations and networks; exciting learning environment (different nationalities).

In the end, the student gets one piece of paper saying that "*(s)he has obtained a joint degree in the universities of Algarve, Plymouth, Cadiz and Bergen*".

In Norway, there is a very strong pressure from the government for international cooperation and exchange.

A lot of new private institutions arise in e.g. Poland and Portugal that give out certain degrees...

How to reward the professors that go along with international cooperation? Some ideas:

- access to technicians
- core funding of the thesis of the student

All participants agree that having been abroad with ERASMUS Mundus is a serious asset for the student as well, e.g. to get appointed a position at a university.

Else Jerdal presents "UiB experiences with joint degrees at doctorate level".

= Joint degree, not joint programme.



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→ joint PhD supervision agreement. At least one supervisor from each of the two institutes. One evaluation committee; one defence (can be in either of both universities). The candidate obtains the PhD degree at both universities. It is important (!) to make the agreement as precise as possible.

Problems arise due to differences between institutions (e.g. presence of supervisor at defence obligatory or not permitted).

Need for recognition of double/joint doctoral degrees at national level. Double degree: joint degree or joint programme?

Students register in both universities. They get a double recognition for the same amount of work; some people do not agree with this system.

Yngvar Olsen from the Norwegian University of Science and Technology presents about the new emerging Technology Platform in Aquaculture (EATIP). He explains why Europe needs an aquaculture technology platform. To cover the future fish markets, the global production of fish has to be increased from 120 mill. tons in 2005 to 180 mill. tons in 2030. The increase will have to come through marine aquaculture. To strengthen the European position in this global development, new technology is needed. A technology platform will enable European aquaculture to maintain its world leadership.

Europe vs. World: Europe is especially working with high-quality food sources such as fish (e.g. salmon), whereas other countries are more focused on crustaceans and marine plants.

EATP: European Aquaculture Technology Platform. Several Special Support Actions:

- AquaBreeding: sustainable use of genetics and breeding
- OATP (offshore aquaculture): evaluation of the formation of offshore aquaculture

There are 32 technology platforms in Europe. + many interest groups behind it. But not for EATP: only few interest groups. This is hoped will increase in the near future, and continue to grow.