

M.Sc. PROGRAMME IN MARINE SCIENCE AT AARHUS UNIVERSITY 1990–2003

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The Master of Science (M.Sc.) programme in marine science took place at Aarhus University in the period 1990–2003. The primus motor of the programme was the late Jørgen Hylleberg (1935–2019) who was the course director until 1999 and then Tomas Cedhagen served as course director until the programme stopped. Jørgen Hylleberg was stationed at Phuket Marine Biological Center in the period 1979–1982 as a DANIDA advisor and continued to work as such for three months per year in the period 1983–1994. During this period, he realized that a scientific programme on marine science supported by education of younger scientists would be highly beneficial for development of marine science in Southeast Asia. This idea was the kick

off for the Tropical Marine Mollusc Programme (TMMP) and the M.Sc. programme.

The M. Sc. programme was running from 1990–2003 and each participant spent two years in Denmark. In all, 68 students obtained the M. Sc. degree. The programme was hosted by Aarhus University and the topics were taught by teachers from the Department of Marine Ecology or other institutions. Furthermore, several staff members from Marine Ecology took actively part in the programme. I attended the two first courses as teacher at a single course, but more heavily on the last three teams. The table below shows the period in Denmark, the number of students, their nationality, and the sponsors.

Team No.	Period in Denmark	Number of participants from				Financed by
		Cambodia	Indonesia	Thailand	Vietnam	
1	1990–1992		13	2		World Bank
2	1994–1996		8	2		World Bank
3	1997–1999	1	5	2	4	DANIDA
4	1999–2001	2	4	2	8	DANIDA
5	2001–2003	2	3		10	DANIDA

The participants were selected by two persons from Aarhus University, one of them the course director, and persons from the local institutions. The requirement for attending the course was that the participant had a B. Sc. in a discipline within marine science, was an employee at a university or a research institution, had a good knowledge of English and agreed to return to their home countries after obtaining the M. Sc. in Denmark. The participants were recruited from universities, research institutions, museums, reference collections *etc.*

The course consisted of two years, the first year encompassed theoretical, practical and additional training and the second year encompassing three months for writing a minireview, six months for practical research and three months for writing up

the thesis. The following topics were taught in the theoretical part: systematics, invertebrate zoology, phycology, marine ecology, population biology, fisheries biology, aquaculture, environmental biology, oceanography, benthic boundary layer processes, geomorphology, data analysis and statistics, theory of science and finally scientific writing and presentation. The practical training encompassed molecular markers, aquaculture, systematics, experimental biology and oceanography, all of these courses took place at other labs at the campus or at field stations either in Sweden or Denmark. The additional training was a course on Danish language and culture. Frankly, I encouraged the participants to put their efforts on language into English. However, it is still fun to receive a mail, saying tusind tak.

Especially, the first year was very demanding, new country, far away from home, family and friends, only English used for communication and other manners for behaviour among teachers and students. I still remember when I the first time declared, that I could not answer the question, but would look it up and bring the answer the next day. A teacher who did not know everything immediately, that was very difficult to accept for the students.

It has to be emphasized that also the use of IT was totally incorporated in the teaching. Most of the participants had very good knowledge of IT. One problem which I faced many times was the great confidence in any writing at the internet. The point is that there is no control or nearly no control on the written items on the internet as long as it is obeying the rules for communication in your country. Peer reviewed journals have at least some control on the written items. So, one of the greatest tasks was to learn to be critical to written items and to find methods to check the information.

Another great job was to learn how to write in your own way and not to copy another scientist's writing and to avoid redundant text, *e. g.*, don't explain results in both text and table. The course on writing and presentation was highly useful for all and for me, too. It was a nice way to have the structure of a presentation, either oral or written, clearly specified.

A third outcome of the programme was the establishment of contacts to other scientists in

South East Asia. The possibility to have contact to people in the area with problems similar to yours can be of great help, exchange of views is important for progress. Mutual respects for each other whether you come from Asia, Europe or other continents will improve the scientific world and be beneficial for humanity.

Unfortunately, there was no money for Ph. D. degrees in the programme. However, some of the students got a Ph. D. in Denmark, paid by other projects. A questionnaire was performed in 2000 among the 37 persons, educated in the period 1990–1999. 27 responded on the questionnaire and among these 19 either had finalised or were working on a Ph. D. The countries, where the studies took place, were Australia, Denmark, Germany, Indonesia, Japan and Thailand.

In 2014 my husband and I were invited to Viet Nam by Vietnamese participants. We visited the cities Hanoi, Hai Phong, Nha Trang and Ho Chi Minh City, but unfortunately we did not manage to incorporate Can Tho in our visit, which I deeply regret. We got the possibility to meet 14 of the Vietnamese group encompassing 22. Several of them had obtained Ph. D. degrees and leader jobs in their national research institutions. It was wonderful to meet them again and see how well they were doing. This reunion got me to feel that at least with my job as a teacher in the programme had been successful as was the programme.

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