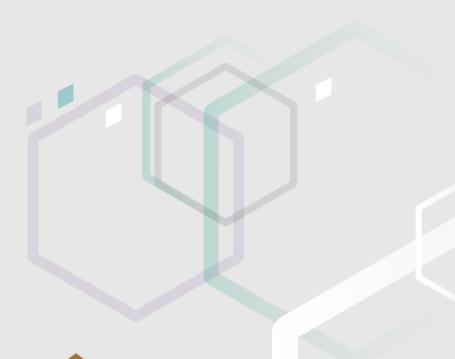# Appendices to EUROMA

Molecular Biology

November 2017

Contents

Appendix 1. Project plan and invitation to participate in the EUROMA project

Background[1]

The Norwegian Ministry of Education and Research has commissioned the Norwegian Agency for Quality Assurance in Education (NOKUT) to develop and carry out a pilot project to compare Norwegian master degree programmes with relevant programmes in other European countries. To carry this out, NOKUT has invited sister organizations in the Netherlands (NVAO), and Sweden (UKÄ) to take part in the project. Together, the three quality assurance bodies have developed a project plan for benchmarking of a small number of programmes from each of the four countries, in two selected subject fields – molecular biology and economics (in some countries termed social or national economics).

The key elements of the pilot project are that the participating programmes will first participate in identifying critical aspects for high quality subject specific master's education (establishing benchmarks) and subsequently reflect on their own goals and practices for achieving high quality in relation to these benchmarks. The methodology incorporates meetings and discussions between programmes, which we expect will give valuable input to the project as well as being interesting arenas for sharing knowledge and experience between programmes. We would like to emphasize that neither the methodology nor the expected output of the project overlaps with, or is connected to existing external quality assurance processes in any of the four countries. Thus, the project and its methodology is developed with the purpose of identifying and comparing national characteristics, sharing good practices and promoting quality enhancement. It is not an aim to assess or rank the programmes individually on specific aspects or as whole entities.

The formal output of the project will be quality profile reports describing benchmarks and characteristics of master's degree education in the four countries in the two subject fields. The reports will be written by expert teams representing academics and students with a background in the relevant subject fields. In addition, the roles of the expert teams will be to facilitate discussions between programmes and challenge the programmes to reflect upon their own goals and practices with respect to quality throughout the project.

Aims and goals

The two overarching goals of the project are to develop and test a methodology for identifying subject specific benchmarks of quality in education at programme level, and to facilitate quality enhancement through discussions and sharing of knowledge between participating programmes. Thus, the project is a pilot study where the methodology has been developed in order to address both goals. From these

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[1] The original project plan given in Appendix 1 uses the term «benchmark». As explained in Appendix 2, the focus on benchmarking was discontinued.

goals it follows that the methodology should be suited for identifying subject specific quality issues, and at the same time be generic so as to be applicable for all subject fields and educational levels.

Goals for the pilot:

- Define benchmarks for high quality master education in molecular biology and (social) economics. This includes identifying critical areas of practice and describing what constitutes a high quality level within the identified areas.
- Describe and compare national characteristics of master's education in relation to the identified benchmarks. The goal is to obtain indications of systematic similarities and differences, including the aims and means for reaching high-level quality, as well as relative strengths and weaknesses. It is <u>not</u> an aim to assess or rank the programmes individually on specific aspects or as whole entities.
- Facilitate quality enhancement in the participating programmes based on peer-learning and sharing of knowledge and good practice. The methodology incorporates discussions among peers on what is considered important factors for high quality and provides benchmarks of critical quality aspects based on input from an international pool of programmes in the same discipline.

Participants

- 18 master degree programmes:
  - Three master's degree programmes in molecular biology in each of the three participating countries (altogether 9).
  - Three master's degree programmes in (social) economics in each of the three participating countries (altogether 9 programmes).

  As a guideline, when meetings between the project participants are held (see below) each programme should be represented by one master's degree student and two academic staff members that among them have knowledge and experience from teaching, programme design and research.

- Expert teams in molecular biology and economics with relevant experience. Each team consists of five members, one expert in the field (research/education) from each participating country as well as from the UK, and a student representative with relevant subject background recruited by the European Student Union (ESU).
- The three national quality assurance agencies in Sweden (UKÄ), Netherlands (NVAO) and Norway (NOKUT) who will administer the project.

Methodology and process

The process has the following key elements:

Step	Task/event	Timeline	Involved	Comment
PHASE 1 (Establishing critical quality factors)				
1	The programmes submit self-presentations	June-August 2016	-Programmes	The self-presentation contains three parts, where the programmes are asked to: • Highlight elements and practices they consider vital for high quality of master education within their subject field. • Describe areas of quality and/or practices where they consider they do especially well. • Key facts that describe their programme such as number of students, learning outcome descriptors, programme structure and assessment of master thesis/project/dissertation. Where possible, factual information were filled in by the national agencies. The primary purpose of the self-presentations is to share information between programmes and experts as part of the preparation for the national seminars (step 3). Documentation will not be required. The self-presentations should be kept short and sharp (maximum 5 pages).
2	National subject specific seminars/ workshop (one day in each country)	September-October 2016	-Programmes (1 seminar each) -Expert panels (3 seminars each) -National QA agencies acts as secretaries	The programmes within the same subject field and country together with the expert team meet and through discursive processes arrive at 'national' critical factors for achieving high quality master's programmes in a given subject. The expert teams attend the seminar in every country. Their role is to facilitate the discussions and challenge the programmes to pinpoint which factors are critical for high quality.
3	Preliminary quality profile reports	November 2016-January 2017	-Expert panels (one report each) -NOKUT (secretarial assistance)	Two reports (one for each discipline) where the experts compare and comment on differences and similarities between programmes and countries. Based on the self-presentations and the discussions at the national seminars, the experts also develop a list of across-country subject specific critical quality factors that the programmes will compare themselves against in phase 2.
PHASE 2 (Strength/weakness analyses)				
4	Programmes' self-reflection	January-February 2017	-Programmes -National agencies	Self-reflection in the form of a strength/weakness analysis and examples of good practice against subject critical quality factors from phase 1. Self-reflections are kept short and to the point, and supported by documentation only as necessary. Documentation that already is available through national register databases or recent quality assurance processes will be compiled by the QA agencies to lessen the administrative burden for the programmes.
5	Analyses of self-reflection	February 2017	-Expert panels	Expert teams' introductory analysis of submitted self-reflections, with the purpose of preparing questions for the seminars in step 6.
6	International seminars (One day gathering all programmes in each subject field)	March 2017	-Programmes (1 seminar each) -Expert panels (1 seminar each) -National agencies acts as secretaries	Expert teams will facilitate discussions between programmes on their strengths and weaknesses related to the international subject specific critical quality factors, as well as sharing good practices. The discussions will be organised as workshops and presentations. They will have the character of a peer conversation and seeks to clarify and highlight how strategies and practices reflect subject specific critical quality factors.

PHASE 3 (Analyses and discussion of output from the project)				
8	Final report	Fall 2017	-Expert panels -NOKUT , UKÄ, NVAO (secretarial assistance) -Programmes	Experts' final analysis of the output of the project in the form of a published report, presented in terms of discussions of characteristics between programmes and countries, strengths and weaknesses, areas for improvement, and good practice, in relation to critical quality factors. The emphasis will be comparisons and discussions of strategies and practices rather than individual programmes. The programmes comment on factual errors before publication.

Appendix 2. Comments to the project plan, methodology and process

Major challenges and solutions

Goals and output

The original commission from the Norwegian ministry of research and education stated that the project should both develop a methodology for benchmarking the quality of similar programmes across European countries, and examine whether the quality of Norwegian MSc programmes is at an international level. In order to carry this out, NOKUT invited Quality assurance agencies in Denmark (DAI), the UK (QAA), the Netherlands and Flanders (NVAO) and Sweden (UKÄ) to collaborate on developing a project addressing these goals. It very quickly became apparent that neither the invited Quality assurance agencies, nor programmes in their respective countries, voluntarily wanted to participate in a project involving assessment and traditional comparative benchmarking of the quality of individual programmes. Thus, the goals for the project had to be redefined, to instead focus on quality development by identifying critical quality factors and facilitate discussions and sharing of knowledge and good practice between participating programmes. The term "benchmarking" used in the original project plan given in Appendix 1 was discontinued. It was also necessary to make it clear that the project should not be connected to formal quality assurance processes in any of the participating countries.

National contexts

Development of the methodology and participation in the project has been heavily influenced by the different contexts of national policy and formal quality assurance schemes in different countries. In Norway, the quality assurance schemes have never involved systematic re-accreditation or direct evaluation of the quality of all study programmes. To this end, the Norwegian ministry's suggestion to initiate a project with the purpose of examining whether Norwegian programmes hold an international quality level through benchmarking appeared to be a natural choice. In contrast, formal quality assurance in Sweden, Denmark, the Netherlands and Flanders have until recently included systematic re-accreditation or evaluation of programmes where the quality level were assessed by international peer-review panels. Comparative evaluation or benchmarking of the quality at the programme level therefore appeared redundant and unattractive in these countries.

In the fall of 2015, the Danish government announced significant budget cuts for the higher education sector. This led to a climate of distrust between the Danish HEIs and the authorities, and a general unwillingness among Danish HEIs to take part in further non-obligatory evaluation projects. Thus, DAI found that there was no support for the project among Danish HEIs and therefore had to withdraw from the project.

In the beginning of 2016, QAA also had to withdraw from the project. The primary reasons were that their contract with the Higher Education Funding Council (HEFCE) to carry out quality assurance of higher education in England was discontinued, and that English HEIs and programmes at the same time had to respond to the introduction of the Teaching Excellence Framework (TEF) in England.

Recruitment of programmes

In order to include comparable Economics and Molecular Biology programmes from Sweden, the Netherlands/Flanders and Norway, UKÄ, NVAO and NOKUT decided to approach programmes from traditional universities and not university colleges or universities of applied science. The goal was to include three programmes in each subject field from Sweden, the Netherlands/Flanders and Norway, which proved to be a challenge. The main reason was that participation in the project was voluntary (in contrast to many other evaluation processes carried out by the national quality assurance agencies), and several programmes were not able to prioritize participation due to either lack of time among key personnel or financial constraints. Other programmes that were in the process of redesigning or making substantial changes to their study programmes, felt that participation at this stage would be premature. Subsequent feedback from programmes that did commit to the project indicates that the novelty of the methodology presented in the project plan initially appeared unclear with respect to the expected output, benefits of participation and possible follow-up. It cannot be ruled out that this may have influenced some programme's willingness to commit to the project.

In order to successfully recruit programmes to participate, it was necessary to adopt a highly flexible approach and not limit participation to programmes with similar structures and scope within each subject field. A consequence of this flexibility is that the participating programmes display a high degree of variation with respect to number of students, structure (e.g. one-, two- and five year integrated master programmes and scope (e.g. discipline or inter-/multidisciplinary orientation). However, as the project progressed, it became apparent that this variation became highly valuable by providing a rich material from which to compare, discuss and share experiences and practices, and identify possible solutions to common challenges.

Appendix 3. Programme self-presentation template

The purpose of this document is to provide information which can be shared between participating programmes and the expert panel in preparation for the national seminars/workshops. It will not be assessed in any way. Further documentation to support the statements given is not required.

Description of the programme and relevant data

Where possible, this will be prepopulated by the national agencies with information available publicly or from other sources, drawing on programme documentation.

- Programme title
- Degree awarded
- Programme duration
- Location(s) where programme is delivered
- Mode(s) of study
- Number of students enrolled for each of last three years
- Number of students graduated for each of last three years
- Admission requirements
- Programme intended learning outcomes (outcome descriptors)
- Programme structure
  Describe the components of the programme (eg the modules), indicating the weighting/size of each element, which are compulsory or optional and any rationale for sequencing. Describe the programme subject content (including any specialisation). Please provide a link to any publicly available description of the programme. If helpful, please include a diagram
- Proportion of ECTS points or final mark allocated to student thesis/project/dissertation
- Assessment of student thesis/project/dissertation
  Describe how the thesis/project/dissertation is assessed, and how marks are awarded (eg if there are separate marks for the thesis and for its defence)
- Supporting information
  Where available, please provide links to, or attach, University or local strategies relevant to learning, teaching and quality in master's programmes

Maximum 2 pages

Qualitative statement, produced by the programme

Please address the following questions:

- What is the general vision and aim of the programme?
- What distinguishes your programme from other master's programmes in the subject in your country? Why do students chose this programme?
- What elements (practices, resources, etc.) do you consider particularly important for achieving high quality in master programmes in your subject?
- What elements and/or practices in your programme do you consider result in particularly high quality?

When answering these questions, you may, for instance, wish to refer to distinctive curriculum content, the development of specific skills (either generic or subject-related), innovative forms of teaching or assessment, use of specialist facilities, the research-teaching nexus, relationships with industry or employers, among other factors.

Maximum 1500 words

Programme commentary on the project

Please describe briefly what you hope to get out of the project. This will be used to help shape the outputs of the project, including the design of the latter stages, and to provide a basis for evaluation of the effectiveness of the project.

Maximum 500 words

Appendix 4. Programme for the national seminars

Scope and time

There will be three seminars in each discipline, one in each country; altogether 6 seminars.

Economics:

7. September – Norway, Oslo

14. October – Sweden (tentatively at Lund University)

27. October – The Netherlands/Flanders

Molecular biology:

21. September – Sweden (tentatively at Uppsala University)

22. September – Norway (NTNU, Trondheim)

18. October – The Netherlands/Flanders

Programme

The seminars should follow the same programme template, which must be agreed among the participants beforehand. The goal of the first round of national seminars is through discursive processes identify critically important factors for high quality MA programmes in each country and describe what constitutes a high quality level related to these factors.

The expert panels will subsequently

- summarise the seminar outputs as 'national' benchmark profiles for high quality master's programmes in given subject, highlighting national characteristics and priorities.
- develop across-country subject specific benchmarks that the programmes will compare themselves against in part 2 of the project.

The seminars will have the duration of one day. The members of the expert panels and agency representatives should meet the day before the very first seminar in each subject field to plan the seminars. For the following seminars, experts and agency representatives should travel the evening before so a short meeting can be held in the morning prior to the seminars to summarize findings from the self-presentations and prepare. If possible, the seminars should be held at one of the participating institutions. This saves time and traveling expenses. Programme suggestion:

10:00 – 10:30: Arrival and coffee

10:30 – 10:45: Welcome and presentations. Brief intro by NOKUT representative.

10:45 – 12:00: Identifying quality factors/benchmarks: Each programme gives its response to the following questions:

1. Identify critically important factors for high quality in an MA programme in your discipline

- Why do you consider them critically important?
- How are they related to the objectives/goals for a program in your discipline?

2. Please give some examples of what you particularly prioritise in your programme in order to attain (and retain) high quality. And why?

3. How would you characterise your actual performance in relation to the factors described in question 1?

- Where do you think that you succeed – and what are the toughest challenges?
- How do you know? Please provide examples of what kind of indicators you find useful (documentation not expected at this stage)
- Please provide examples that could serve as good practice cases

Program representatives should prepare by reading and reflecting on self-presentations from all programs attending the seminar.

12:00 – 12:45:   Lunch

12:45 – 14:00: Discussion, probing deeper into interesting points from the written and oral presentations; perhaps address unclear or problematic points, or disagreements/differences. The discussion will be led by the expert panel with the national expert in each country serving as chair. However, it should be emphasised that the program representatives have an equally important role in challenging their own and the other programs goals and priorities with respect to high quality.

14:00 – 14:30: Coffee

14:30 – 16:00: Discussion, led by panel: Towards a national benchmark? Attempt to sum up. Identifying common denominators and priorities for providing excellent MA programmes in this discipline.

Participants

9 (3 x 3) programme representatives
4-5 experts
1 secretary (from relevant national agency)
1-3 additional agency representatives
<u>15 - 18 participants altogether</u>

A brief bio of all participants should be distributed to everyone beforehand in order to shorten presentation rounds.
Programme chair: Representative from relevant national agency

Appendix 5. Template for self-reflection analysis

With reference to the each of the unified quality factors and questions above[2], please address the following:

1. The rationale for your goals/scope/practice.
2. Strength/weakness analyses related to critical factors
3. Examples of good practice with the purpose of sharing experience and knowledge.

What do you consider relevant indicators for assessing the quality of your program related to the critical factors? We have added indicators that was mentioned in the first round in Part 1 of the preliminary report. Are some of them less relevant for you? And if so why? Additional indicators you find useful?

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[2] The list of quality factors and questions were presented to the programmes in a preliminary report. The quality factors are the same as listed in the main report.

Appendix 6. Programme for the international seminar in Molecular Biology

The goal for the international conference is that:

The programmes within the same subject field across countries (eight programmes), together with the expert teams meet, and through discursive processes discuss strengths and weaknesses of the participating programmes related to national characteristics and the unified quality factors presented in part 2 of the preliminary report, and share information and good practices as a means for inspiration and quality development.

The expert team will facilitate discussions between programs on their strengths and weaknesses related to the national characteristics and international subject specific benchmark/quality factor profiles (in part 2 of the preliminary report). The discussions will be organized as workshops and short presentations. They will not have the character of an assessment, but rather seek to clarify and highlight how strategies and practices reflect the national characteristics and subject specific benchmarks/quality factors. The outcome of the seminar should be a joint discursive analysis of strengths and weaknesses as well as examples of good practices related to national characteristics and subject specific benchmarks/quality factors that, together with other information produced by the project, will be summarized in the final report.

As a preparation to the international conference, all participants are asked to reflect on the topics/questions for the sessions in the program below:

Programme

Location:

NOKUTs facilities in Drammensveien 288 in Oslo (Lysaker).

Travel directions:

See separate documents

30. March

16:00-17:00 Pre-meeting for NVAO, UKÄ and NOKUT representatives

17:00-18:30 Pre-meeting for experts and NVAO, UKÄ and NOKUT representatives

19:00 – Social dinner for all participants

31. March – seminar from 09:00-16:00

09:00-09:15. Welcome and organization.

09:15-10:00 – Session 1 (Plenary) - Characteristics of the Molecular Biology programmes in the three countries

Chair:

Introduction and presentation of preliminary findings by expert panel (5-10 min.). Then each programme responds briefly by presenting their view on their programmes' strengths and weaknesses related to the quality factors associated with the national characteristics.

10:15-11:00 – Session 2 (Breakout session/workshop) – on unified quality factors/benchmarks

>   Group 1: Structure, scope and content. *Chair:*

>   Group 2:

- Students as a quality factor – recruitment and internationalization
- Teachers as a quality factor – research, research based education and pedagogic development.

Chair:

Group 3: Learning processes – teaching methods, feedback, assessment and thesis. *Chair: Lisa*

11:00-12:00 - Lunch

12:00-12:45 – Session 3 (Breakout session/workshop) – on sharing strengths and good practices[3]

>   Group 1 - students: Share and discuss your programme's strong points and examples of good practice with the other programmes. Which practices presented by the other programmes do you consider relevant for improving your own programme (based on information in the preliminary report and presentations/discussions at this seminar)?

>   *Chair:*

>   Group 2 - teachers: Share and discuss your programme's strong points and examples of good practice with the other programmes. Which practices presented by the other programmes do you consider relevant for improving your own programme (based on information in the preliminary report and presentations/discussions at this seminar)?

>   *Chair:*

>   Group 3 – programme coordinators: Share and discuss your programme's strong points and examples of good practice with the other programmes. Which practices presented by the other programmes do you consider relevant for improving your own programme (based on information in the preliminary report and presentations/discussions at this seminar)?

>   *Chair:*

13:00-14:00 – Session 4 (Plenary) - Presentation and discussion of key points discussed in the workshops (session 2 and 3) by each group

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[3] We have tentatively divided the programme representatives into three groups in this session: students, teachers, programme coordinators. This division is flexible and will be adjusted if necessary.

Chair:

14:15-15:00 – session 5 (Plenary) – Future development of master degree education in Molecular Biology

Chair:

In what direction do you think master education in your field (and country) will/must develop in the years to come? (e.g. structure, content and curriculum development, inter- and multidisciplinary approach, specialization tracks for different careers, etc.). This question does not only relate to areas for development that have been identified through this project, but also to your thoughts on how MSc education in Molecular Biology should develop in general.

The session is initiated by a brief introduction by the expert panel, where they present their overall ideas for areas/topics/trends/demands they believe Molecular Biology education should respond to in the years to come. Followed by open discussion.

15:15-15:30 – Session 6 (Plenary)

Chair:

Wrap up session where the programmes give their preliminary feedback/evaluation of project with respect to the:

- Process/methodology – fit for purpose?
- Results so far
- Peer learning/sharing
- Potential to contribute to quality development in your programme