

EUROSTAT

## **Business Case**

# **European Master in Official Statistics (EMOS): Implementation phase**

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| Document Author: | Zivile Aleksonyte-Cormier, Markus Zwick                             |
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## Consultation:

| Reviewer Name                  | Role            |
|--------------------------------|-----------------|
| Annika Näslund                 | Head of Unit A2 |
| Heads of Unit of Directorate A |                 |

## Terms and definitions:

|                 |  |
|-----------------|--|
| EMOS Board      | A permanent governance body representing universities as well as statistical producers elected for a fixed term (currently the function assumed by the GExp) |
| EMOS community  | All Universities, NSIs and other stakeholders <u>interested</u> in EMOS  |
| EMOS governance | Administrative structure of EMOS, see Annex 1.1  |
| EMOS network    | Universities, NSIs, and other national statistical authorities <u>participating</u> in EMOS  |
| EMOS structure  | Content of the Master programme qualifying for the EMOS label, see Annex 1.2   |
| ESTP            | European Statistical Training Programme  |
| GExp            | Group of Experts from NSIs and universities, see Annex 1.4   |

## 1. Purpose

The **purpose of this document** is to outline the scope, approach, objectives, resource implications and impact on stakeholders of the implementation of EMOS for agreement by the Directors' meeting. The proposal is based on the findings and recommendations of the feasibility study 'Towards a European Master in Official Statistics' and the recommendations of the Group of Experts (GExp).

## 2. Action Required

The Directors' meeting is asked to give its opinion and approve the outlined approach and resources so that EMOS may proceed to the detailed planning and implementation phase. If the DM agrees with the concept, the key ideas should be presented at the ESSC meeting in May 2014.

## 3. Current Situation

The EMOS project was selected by Eurostat as a Vision Infrastructure Project for 2012<sup>1</sup>, which was in line with the objective of **“creating a true European research and training facility in statistics”** as provided for in the Communication from the Commission to the European Parliament and the Council on the production method of EU statistics: a vision for the next decade<sup>2</sup>.

In spring 2012, Eurostat launched a call for tender for the feasibility study 'Towards a European Master in Official Statistics'. The feasibility study, contracted to the consortium ICON-Institute/Genes, was initiated in December 2012 and ran until December 2013. The results of the study are based on 151 valid replies from European universities to an online survey as well as individual interviews at universities and NSIs in 14 European countries.

### Main findings and recommendations of the feasibility study

- Given the national differences regarding the accreditation of new Master programmes, it is recommended to implement EMOS as a label for existing Master programmes. The EMOS label must stand for *excellence* in European statistics and apply quality standards recognised by all concerned stakeholders.
- EMOS raises interest in the majority of the universities visited as long as there is no major impact on the core parts of the Master programmes. Moreover, some programmes are ready to implement EMOS on the basis of the criteria proposed by the feasibility study (only minor changes in their curricula would be required). There are also some universities that are willing to join, but not fulfilling all the criteria yet.
- Curriculum and governance structure for EMOS have been proposed and further developed within the Group of Experts (see Annexes 1.1 and 1.2).<sup>3</sup>

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<sup>1</sup> Item 1.1 of 736<sup>th</sup> Directors Meeting of 17.05.2011.

<sup>2</sup> COM(2009) 404 final, 10.8.2009.

<sup>3</sup> Please be aware that the business case builds on the main principles of the structure and governance of EMOS developed by the feasibility study and the GExp. Some issues are further developed in this business case. If the DM agrees to the main ideas of this business case, both Annexes 1.1 and 1.2 will be revised and the details further developed.

## 4. Objectives and Deliverables

### 4.1 Scope

The main objectives of this project are to establish an EMOS label and to create a network of Master programmes dealing with Official Statistics at the European level. This initiative is considered to be fundamentally important for European official statistics.

### 4.2 Aims and Objectives

Based on the main principles of the structure and governance of EMOS, which have been worked out within the GExp following the recommendations of the feasibility study (see Annexes 1.1 and 1.2), the aim is to implement EMOS in a first group of universities and Master programmes as of autumn 2015, with first graduates expected at the latest in 2017, after which an evaluation will be carried out.

As described in Annex 1.2, the EMOS concept foresees a **flexible curriculum structure** suitable to different types of Master degrees such as Masters in Statistics, Survey Methodology, Economics or Social Sciences. Thus an individual curriculum is to be developed in each case, tailored to the requirements of EMOS and the core programme of the Master. However, some requirements will be common to all universities joining the EMOS network, namely internships in an NSI or another national statistical authority and Master thesis on a topic related to Official Statistics.

As a result, a successful implementation of EMOS will require an adequate preparation phase. During this phase, Universities and NSIs will have to further **develop their collaboration**. Even though many NSIs agree to offer internships, to provide support to Master theses or to give courses in Official Statistics in the context of EMOS, it is important for universities and NSIs to agree in actual terms on the future cooperation, an essential precondition for the participation in EMOS.

#### *Supporting measures*

As a supporting measure to EMOS, the feasibility study recommends central solutions based on distance learning tools. Massive Open Online Courses (MOOCs) with e-learning modules, videos and other training material could offer a platform for sharing knowledge and learning content. Secondly, to support the EMOS network, communication among all partners of EMOS is an important element in building and strengthening the EMOS community. Summer schools and/or workshops could open up opportunities for academic exchange and networking in the area of Official Statistics.

### 4.3 Deliverables and Key Milestones

- The first milestone for further development of EMOS is the ESSC meeting of 14-15 May 2014. **The ESSC will be invited to give its opinion** on the concept of EMOS with regard to its structure and governance as developed on the basis of the recommendations of the feasibility study, the conclusions of the GExp, and the opinion of this DM. If the ESSC agrees to the proposals, EMOS will be ready to proceed to its preparation and implementation phases.

- On 26-27 June 2014, Eurostat and the University of Helsinki are co-organising **the 2<sup>nd</sup> International EMOS Workshop** in Helsinki. The objective of the Workshop is to inform the EMOS community, in particular universities and NSIs interested in implementing EMOS, about the EMOS concept, as agreed by the ESSC. The Workshop will also be used as a discussion platform for the participants to exchange views, plans, and ideas with regard to the implementation of EMOS in their institutions.
- With a view to supporting the preparation process for EMOS, it is proposed to publish a **call for participation** immediately after the Helsinki workshop. It is expected that a first group of Universities, with Master programmes already meeting the majority of the EMOS eligibility requirements<sup>4</sup>, could quickly become eligible to apply for the EMOS label. A preparatory meeting towards the end of 2014 should bring together all participants in the EMOS Network to clarify pending implementation issues and questions relating to the forthcoming application process.
- The **EMOS Board**, composed of representatives from universities and NSIs, should be elected and its composition and mandate approved by the November 2014 ESSC meeting. The main role of the EMOS Board will be to evaluate applications for the EMOS label and to provide recommendations to the ESSC.
- The **call for applications** will be published during the 1<sup>st</sup> quarter of 2015. Having examined the applications, the EMOS Board will recommend to the May 2015 ESSC meeting the award of the EMOS label to eligible Master programmes.
- Depending on the duration of the Master programmes, the **first graduates** could be expected in 2017 at the latest. This objective could also be reached in 2015-2016 under the condition that the EMOS label could be awarded to graduates in already running Master programmes.

Secondary developments include:

- The development of **e-learning content** with a view to building MOOCs for EMOS.
- Setting up of a scheme of **short-term internships** for the EMOS students only. The development of a concept for using EMOS elements for ESS staff.

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<sup>4</sup> The EMOS label will require that the Master programme includes the EMOS module, covering the most important topics in official statistics, as well as an internship in an NSI or other national statistical authority and a Master thesis with a strong link to official statistics; for more details please see Annex 1.2.

#### Timeline:

|                              |   |
|------------------------------|---|
| 14-15 May 2014               | Approval of the EMOS concept by the ESSC meeting  |
| August to October 2014       | Call for participation in the first round of EMOS   |
| November 2014                | Selection of the EMOS Board and approval by the ESSC  |
| 28 February 2015             | Deadline for universities to submit an application for the EMOS label                                       |
| May 2015                     | ESSC meeting to award first round of Master programmes with the EMOS label                                  |
| 3 <sup>rd</sup> quarter 2015 | 2 <sup>nd</sup> call for participation  |
| Autumn 2015                  | Start of first round of EMOS-labelled Master programmes   |
| 29 February 2016             | Deadline for universities to submit an application for the EMOS label                                       |
| May 2016                     | ESSC meeting to award second round of Master programmes with the EMOS label and progress report to the ESSC |
| Autumn 2016                  | Start of second round of EMOS-labelled Master programmes  |
| Spring 2017                  | Evaluation of the implementation  |

#### 4.4 Indicators

- The number of universities and NSIs in the EMOS network
- The number of EMOS graduates
- Implementation within the agreed timeline and budget allocation

#### 4.5 What the project does not include

EMOS is not intended to replace the ESTP or internal training in Eurostat or NSIs. EMOS could share the academic offer with the programmes concerned and vice versa.

### **5. Impact Assessment**

In view of the aims and objectives of EMOS as described in Section 4, EMOS has a high impact and links to a number of different stakeholders.

#### 5.1 Stakeholder Analysis

Eurostat, NSIs, other national statistical authorities in the ESS and users of products of official statistics will benefit from the enhanced Master programmes including Official Statistics. First of all, data producers in Europe will get better qualified employees. Secondly, the EMOS Network and EMOS courses could be used for training of ESS staff. In the context of statistical literacy, the ESS will benefit from better qualified users of products of official statistics.

The feasibility study identified the following institutions as key stakeholders in the context of EMOS: NSIs, Eurostat, Universities (academics), Universities (students), ESSC, FENStatS and national statistical societies, line ministries, central banks, and international organisations. Annex 1.3 covers the main results of the stakeholder analysis carried out by the feasibility study.

## 5.2 Project Environment

EMOS is the first project aimed at promoting cooperation between statistical offices and universities to offer content in Official Statistics in regular Master programmes and to build a European community in this field. There are some good examples of cooperation between NSIs and universities in some European countries, but this varies a lot and does not always offer regular possibilities of internships or support for Master theses. The benchmark for these activities is the University of Southampton which offers a Master of Science in Official Statistics in cooperation with the ONS.

Another initiative, outside the ESS though, is the Master in Official Statistics (MOS) initiated by the Universities of Warsaw and Moscow in the Russian language.

## 5.3 Cost-Benefit Analysis

- To maintain the sustainability of EMOS, the project will require permanent **administrative support**. It is suggested that Eurostat would be best placed to provide secretariat support to the EMOS Network. The feasibility study recommends four functions: project supervisor, project coordinator, secretarial support, and IT support. However, 1 FTE is deemed sufficient to ensure coordination and sustainability of the EMOS Network and related activities in the implementation phase until spring 2017.
- Secondly, financial resources are required to organise the **work of the EMOS Board**, a permanent body in the governance structure of EMOS. The costs for the EMOS Board should cover travel expenses and daily allowances, if applicable, for maximum two regular annual meetings.

The above mentioned costs should be re-assessed in the 2017 evaluation of the project. If successful, the necessary financial and in particular human resources for the EMOS secretariat would have to be guaranteed in order to ensure the sustainability of EMOS in the longer run. It is expected that 0.5-1 FTE would be necessary in addition to the current staffing.

## 5.4 Risk Analysis

The feasibility study has identified the following risks and mitigating circumstances (for further details please see Annex 2):

- Low interest of universities in the call for applications
- Low interest of graduate students to apply for the EMOS programme
- Low interest of NSIs to offer internships and support to Master theses
- Stakeholder conflicts of interest

The first two risks are highly relevant for EMOS, but the feasibility study has shown that a lot of universities are interested to participate in EMOS. There is also a wide interest on the side of students to produce and analyse data. Moreover, with the requirements of Big Data, there is an increased labour market demand for graduates with skills in applied statistics.

An active involvement of data producers (NSIs) is necessary for EMOS to succeed. Active involvement of NSIs will require resources, and the input for some NSIs might appear unproportionally bigger than the benefit. To ensure NSIs' commitment to EMOS, it is important to emphasise the benefits of EMOS. Furthermore, it is necessary to start using elements of EMOS for training of NSI staff as early as possible.

## 6. Approach

### 6.1 General Description

Partners involved in EMOS will be exposed to different types of cost:

- Ensuring an adequate functioning of the governance structure
- Providing secretariat support to the EMOS Board and the EMOS network
- Developing and introducing new courses in universities
- Ensuring an offer of internships and support to Master theses in NSIs
- Organising regular conferences, workshops, and summer schools

### 6.2 Resources

As indicated in section 5.3, EMOS requires resources for ensuring the appropriate governance (EMOS Board) and supporting communication and networking in form of conferences, workshops, and summer schools. Secondly, central (distance) learning solutions could be provided through MOOCs or e-learning modules developed for the benefit of EMOS Network, including NSI staff. The following cost estimates refer to the period until the evaluation of the project in spring 2017. In order to ensure the sustainability of EMOS in the longer run, it is expected that 0,5 -1 FTE would be necessary in addition to the current staffing.

| Objective   | Resource requirements in Eurostat   |
|---|---|
| Ensure secretariat to the EMOS Board and EMOS Network   | <b>1 FTE</b> in Eurostat (existing resources)   |
| Scheme of short-term internships for EMOS students within Eurostat  | Offices and other logistics for trainees, mentoring, and support to Master theses   |
| Cover expenses of regular meetings for the permanent governance body (EMOS Board), including participation in workshops and conferences | 12 members (6 universities + 6 members representing statistical producers and users) x 5 meetings until spring 2017 = <b>60,000 EUR</b> (12,000 for each meeting) |



|   | <b>Resource requirements for NSIs and Universities</b>   |
|---|--|
| Adapt Master programmes, also develop and offer new courses for the EMOS module | Costs incurred by universities and NSIs, central learning content could reduce the cost of course development for universities (see e-learning module below) |
| Offer internships and support to Master theses                                  | Costs incurred by NSIs and other national statistical authorities  |
| Provide teaching to the EMOS module at universities                             | Costs incurred by NSIs; however, central learning content could reduce the costs for NSIs (see e-learning module below)                                      |

### 6.3 Project Funding

For the launch of EMOS, it is important that Eurostat provides financial resources as outlined in the table above.

- The financing of e-learning content is open currently. It is proposed that costs could be shared within the ESS.

## 7. **Project Organisation**

### 7.1 Project Manager

Currently, the project manager is Markus Zwick, SNE in the Team of Learning and Development in Eurostat and the ESS of Unit A2. The team leader is Zivile Aleksonyte-Cormier.

### 7.2 Reporting Structure

The project owner for this project is Pieter Everaers, Director “Cooperation in the ESS; international cooperation; resources”.

With the support of the EMOS Secretariat, the EMOS Board will deliver an annual report to be presented in the ESSC meeting in May.

The mandates and decision-making processes are defined in Annex 1.1 – Governance of EMOS.

### 7.3 Project Team

The project team will comprise the following:

- Project leader (Team leader)
- Project manager (SNE)

### 7.4 Project Documentation

All important documents in the context of EMOS are stored in ARES. For external use, the main information on EMOS is available on <http://www.cros-portal.eu/content/emos>.

## Annex 1.1 – Governance of EMOS

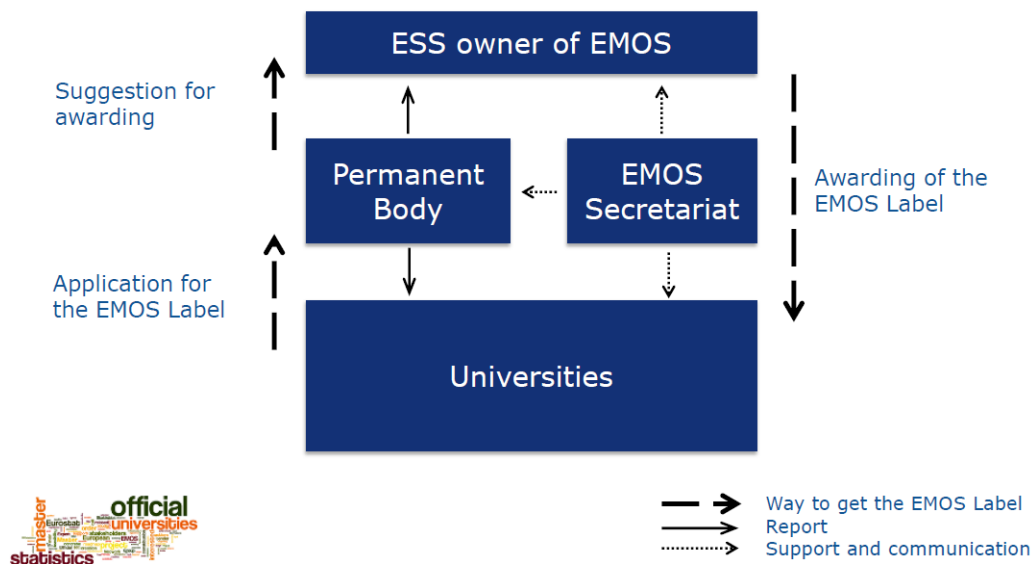
Author: EMOS Group of Experts

19.02.2014

### Draft Model for the EMOS Governance

The following structure has been based on the recommendations of the feasibility study 'Towards a European Master in Official Statistics' and two rounds of discussion in the GExp.

## EMOS governance



### 1. European Statistical System (ESS) as owner of EMOS

After some discussions - also with Eurostat's Unit A1 - it seems that the ESS would be best placed to assume final responsibility for EMOS, meaning that they take on ownership of the quality label EMOS.

The ESS as an entity - with members and observers from the NSIs of the EU member states, the EFTA and Candidate countries as well as Eurostat, the ECB and the UNECE Statistical Division – has a strong link to EMOS, but without any conflict of interests. In the context of EMOS, the responsibilities of the ESS will cover the decision to award (or not to award) a university master course with the EMOS label and will also guarantee the quality of EMOS and, in this respect, the ESS is neutral and independent.

The European Statistical System Commission (ESSC) as representative body of the ESS should award universities who meet the requirements of EMOS. For this task, the permanent body will approve the

application of the universities to get the EMOS label and will give a recommendation to the ESSC. The ESSC will control the quality of EMOS. For this task the permanent body and the EMOS secretariat will draw up an annual report. Furthermore, the ESSC control and convenes the permanent body.

## 2. The Permanent Body (EMOS Board)

The EMOS Board, as permanent body, is responsible for the quality of EMOS. For this task, the EMOS Board reviews the application of the universities to get the EMOS label for their master programmes. If the structure of the master programme is in line with the requirements of EMOS, the EMOS Board will give a recommendation to the ESSC to award this master programme with the quality label EMOS. The university will get the label for four years. The EMOS Board will decide after monitoring the running programmes whether to prolong the EMOS label.

The EMOS Board will also be responsible for the further development of EMOS. The EMOS Board prepares an annual report about its activity for the ESSC. The ESSC report includes a review about refused applications and prolongs the EMOS label. Furthermore, the EMOS Board organises every two years an EMOS workshop to inform the EMOS community about the latest developments. It is recommended that the EMOS workshop should be a satellite event to a bigger European conference for example the NTTS or the Quality conference to get a higher number of participants. Together with the universities, the EMOS Board organises every year a joint one-week 'school ' initiative with EMOS topics for master students and NSI staffs.

The EMOS Board will be made up of twelve members. Six members should come from the universities side. The other places are foreseen for Eurostat, ESAC and four members from the ESS. The members from the universities will be elected. The EMOS Board will develop for this issue an election procedure. For 2014, the Group of Experts will represent the EMOS Board. The GExp will organise the first election of the universities side of the EMOS Board in autumn 2014. The four members from the ESS will be nominated from the ESSC.

The ESS convenes the member of the EMOS Board for three years. A one-off re-election of members is possible.

The EMOS Board will have two gatherings each year. If possible these gatherings should be in parallel to additional activities in the context of EMOS, such as workshops or summer schools, and travel costs for the EMOS Board meetings will be paid by Eurostat.<sup>5</sup>

## 3. EMOS Secretariat

The EMOS Secretariat will be responsible for the daily work. The secretariat supports the EMOS Board in all issues, in particular in terms of the application process. Furthermore, the secretariat will prepare the EMOS Board meetings.

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<sup>5</sup> Draft!! This issue is still open currently.

The secretariat is responsible for EMOS public relation matters. For this the secretariat carries on the EMOS web site to share all relevant information to the EMOS Board, EMOS Network<sup>6</sup> and to the EMOS community<sup>7</sup>.

The EMOS Secretariat will be organised, paid and located by Eurostat.<sup>8</sup>

#### 4. Universities

After a call of participation universities could make an application to participate in the EMOS Network and to get the EMOS quality label. If the university wish, the EMOS Board and the EMOS Secretariat could support the change process of master programmes to reach the requirements of EMOS.

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<sup>6</sup> EMOS Network – all Universities and NSIs who are active in EMOS Master programmes.

<sup>7</sup> EMOS community - all Universities, NSIs and others who are interested in EMOS

<sup>8</sup> Draft!! This issue is still open currently.

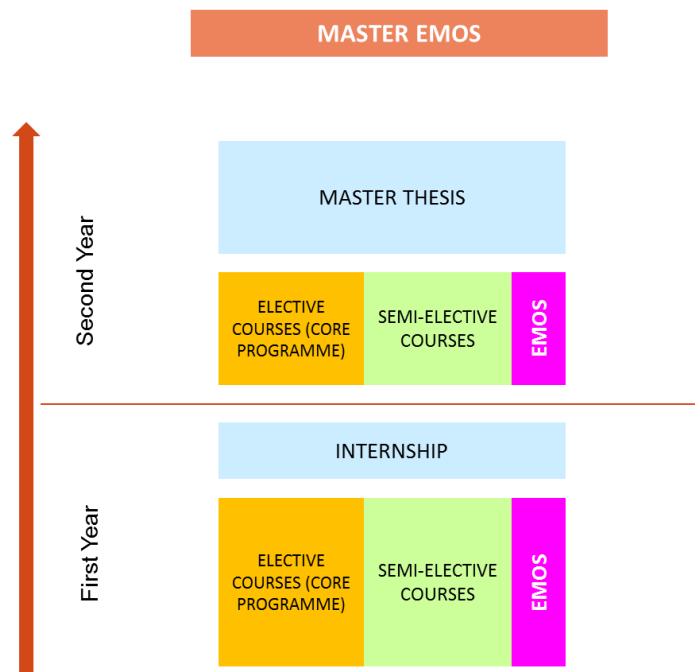
## Annex 1.2 – Structure of EMOS

Author: EMOS Group of Experts

19.02.2014

### Model for the structure of EMOS

The following structure has been built upon the recommendation of the feasibility study 'Towards a European Master in Official Statistics' and two rounds of discussion in the GExp.



#### 1. Introduction

The feasibility study 'Towards a European Master in Official Statistics' has recommended EMOS as a quality label for awarding university master programmes. The requirements are linked mainly to the content of the master programmes, in view of the curriculum or the learning outcome. The consensus of the GExp was that the requirements should be flexible enough that all interested universities could, in principle, participate under the auxiliary condition that EMOS meets the defined level of quality.

An EMOS-labelled master will be made up of four main parts:

- EMOS Module (10% of the credits)
- Semi- elective courses (30% of the credits)
- Elective Courses (25% of the credits)
- Internship and Master Thesis (35% of the credits)

These percentages are approximate and could differ in real application once the EMOS Board has accepted the whole concept of a Master programme.

The weights and contents should be flexible for the pilot phase and should be more fixed with the evaluation after the pilot phase. The pilot phase should be used to implement the structure in running master programmes and some flexibility will be needed to meet the different programmes such as Master in Statistics, Master in Economics, Master in Economic Analysis; Master in Survey Statistics; Master in Business; Public Policy and Management etc. The EMOS Board will have the authority to decide if real application of a master programme is adequate to make a recommendation for labelling this programme with the quality label EMOS.

In the pilot phase, the EMOS Board will provide support to universities to achieve a suitable structure for their master programme.

## 2. The EMOS Module

The EMOS Module is compulsory and includes the topics of Official Statistics and the European dimension and should have a weight from around 10% of the credits for the whole Master programme. The knowledge of these courses is mostly on the side of the ESS. The pilot phase should open up answers on the best way to transfer this knowledge to the university courses in a regular way. The feasibility study recommends developing a MOOC (Massive Open Online Courses) for sharing the topics of EMOS. In particular, MOOCs seem to offer a workable solution for the topics of the EMOS module.

The content of the EMOS Module will be more or less the same in different Master programmes. From this point of view, it makes sense to develop a central solution, especially when most of the knowledge is outside the universities. In this field, E-learning modules, videos and slides accessible on a MOOC could be a support tool for all interested universities. Summer or Spring Schools could also be useful for the EMOS Module. These central offers can be used for a single programme but are not compulsory; only the content is compulsory.

The content of the EMOS Module is described in a positive list. This list could include some more topics than it could be offer for 10 % of the credits of a Master programme. In this way, universities will have the option of choosing issues with a stronger link to their main programme.

Currently, the following topics for the EMOS Module are on the positive list:

European Union, European Statistical System (ESS), Code of Practice, Quality, Production Model, Data Management, Metadata, Sampling Theory, Statistical Disclosure Control, Data law, Administrative Data, Big Data in Official Statistics, Classification, Evaluation and Monitoring, Statistical Data Editing.

The EMOS Board will be responsible for this module. The EMOS Board can decide to add or delete topics on the list. The main objective of the EMOS Module is to include the most important topics of Official Statistics in Master programmes. From this point of view, the list should not include much more content than 10 % of the credits of a Master programme and choice should be limited. The topics of the EMOS Module should be the core module.

### 3. Semi-Elective Courses

The Semi-Elective courses include empirical and statistical issues. These topics are in the offers of a lot of university courses. The knowledge of these issues is typical at the universities and is offered in different master programmes.

The weight of the semi-elective courses should have around 30 % of the whole credits of a master programme. The content of the semi-elective courses are also described in a positive list. This list should be much longer than it is necessary for 30% of a master programme credits. The aim is to collect a bigger frame of issues in this module to make EMOS compatible for more programmes. It should be possible that Master in Economics as well as Master in Survey Methodology find statistical topics in this module that are more or less tailored to their main programme.

The content of the Semi-Elective Courses is also described in a positive list. Currently following topics are on the positive list:

Survey Methodology, National Accounts, Demography, Price Statistics, Econometrics, Econometrics of Time Series and Panel Data, Multivariate Statistics, Small Area Estimation and Spatial Statistics, Statistical Computing, Record Linkage and Statistical Matching.

Universities have the possibility to choose topics in this module. That means the term elective in the name of this module. But universities have to choose the topics from the definite list in this sense it is a semi open process.

The EMOS Board will have also the responsibility for this module list. The EMOS Board can decide to add or delete topics on the list.

### 4. Elective courses

In this module with a weight of 25 % of the credits of the Master programme the universities are completely free to choose the topics. The responsibility for this module is entirely on the side of the University.

### 5. Internship and Master Thesis

This module is to be developed more concretely during the pilot phase and the key idea is to have a regular structure for internships and a Master Thesis booth with the support of the NSIs. Students should have the possibility to get practical experience inside the NSIs. It is expected that they find in this time a topic with a link to Official Statistics for their Master Thesis and the NSI provided the thesis.

It is necessary to ensure that enough places for internships are available. For the pilot phase, it could be organised case-by-case but in the middle term, it is necessary to have regular structures. For the beginning, students can make their internships in the institutions of the ESS. If they need to make an internship in another institution with a strong link to advanced statistics, the EMOS Board will decide if the institution is adequate for the EMOS context. The EMOS Board will also decide for alternatives to an internship inside an institution of the ESS. For example, the assistance in a university project like a FP 7 project also sufficient to get the credit points for the internship.

The internship should have a weight from around 10% of the credits of the master programme. Under the role that 2 ECTS credits are foreseen for 50 to 60 hours of work the internship will last in general six to eight weeks.

The Master Thesis should have a weight of 25 % of the credits as rule of thumb and a strong link to topics of Official Statistics. The thesis should be supported by an institution of the ESS; the evaluation and grading of a master thesis is the responsibility of the university.



## Annex 1.3 – Stakeholder Analysis

### Expectations of the key stakeholders and stakeholders analysis matrix

Figure 1: Expectations of the key stakeholders

| Stakeholder and basic characteristics | Concerns   | Interests in EMOS  | Possible action to address stakeholder interests   |
|---------------------------------------|--|--|--|
| NSIs                                  | <p>To better meet the needs of all users (national level, regional level and others users)</p> <p>Budget cuts (crisis), pressure for productivity/efficiency /gain of time via innovations and IT tools</p> <p>Statistics compliant with European and international standards</p> <p>European IT tools</p> | <p>European dimension (code of practice, other European frameworks)</p> <p>Quality (management and data production)</p> <p>Professional qualification</p> <p>Reinforcement of the NSS</p> <p>Create a European network of statisticians</p> <p>Create more links with universities</p> <p>Some opportunities of Research Masters Internships</p> | <p>Better prepare new recruits to official statistics</p> <p>Improve the ability to integrate new technologies and methodological innovations</p> <p>Exchanges of good practices</p> <p>Common statistical culture</p> |
| Eurostat                              | <p>To provide Statistics with European and international standards</p> <p>Common language</p> <p>Common knowledge</p> <p>European IT tools</p> <p>European statisticians mobility</p> <p>To create more synergies between NSIs and Universities</p> <p>Recruitment pool for Eurostat</p>                   | <p>Harmonisation of European Statistics</p> <p>Improve quality and statistic innovations</p> <p>Improve qualification of European statisticians</p>  | <p>Reinforce the network of statisticians</p> <p>Contribute to define a common language and a common knowledge in official statistics</p>  |
| Universities (academics)              | <p>High degree qualification</p> <p>Employment (national and international level)</p> <p>Network between Universities (EMOS)</p> <p>Increase the number of students - attractiveness</p> <p>Source of funding via the students' tuition fees</p>   | <p>New opportunities for students</p> <p>International label</p> <p>International visibility</p> <p>Mobility for academics and students</p> <p>To consolidate relations between NSIs and others universities (research opportunities)</p> <p>Funding opportunities</p>   | <p>Life-long learning (including NSIs)</p> <p>Summer school</p> <p>Expertise within the NSIs</p> <p>Research projects</p>  |
| Universities                          | Employment   | More employment  | Support mobility of  |

| Stakeholder and basic characteristics | Concerns  | Interests in EMOS  | Possible action to address stakeholder interests  |
|---------------------------------------|---|--|---|
| (students)                            | Better salary<br>Diploma with a European label<br>Professional practice<br>English practice           | opportunities at national and European level<br>Better qualification<br>Better job and salary<br>Scholarship opportunity<br>European mobility<br>Internship in NSIs network and stakeholders<br>EMOS Students network<br>EMOS alumni network | students<br>Internships opportunities<br>Creation of a Prize for the best Master Thesis or Internship   |
| ESSC                                  | Benchmarking<br>To provide statistics with European and international standards                       | Harmonisation and development of statistical production<br>Innovation (methodology)  | Exchanges of good practices<br>Common statistical culture   |
| FenSTATs                              | Promote statistical science in general,, support for the diffusion of statistical education in Europe | Mutual collaboration and animation in the EMOS community   | International conferences, journals, books, various publications supplied by the EMOS community   |
| Line Ministries                       | National statistical coordination<br>Data access<br>Data coherence/consistency                        | Quality (management and data production)<br>Professional qualification<br>Reinforcement of the NSS   | Better prepare new recruits to the official statistics<br>Improve the ability to integrate new technologies and methodological innovations<br>Exchanges of good practices<br>Common statistical culture |
| Central Banks                         | Financial regulation, risk management, overseas inter-relations<br>Data comparability                 | European and international dimension<br>Quality: management and data production<br>Professional qualification<br>Internship opportunities  | Improve the ability to integrate new technologies and methodological innovations<br>Common statistical culture  |
| International Organisations           | International data comparability  | Knowledge of international standards   | Take into consideration the international   |

| Stakeholder and basic characteristics | Concerns               | Interests in EMOS                       | Possible action to address stakeholder interests                          |
|---------------------------------------|------------------------|---|---|
|                                       | Adherence to standards | (concepts, classification, methodology) | standards<br>Common statistical culture (in an international perspective) |

### Relationships between stakeholder groups (possible synergies)

The stakeholders listed above could have some interesting interactions and synergies to be taken into consideration for EMOS:

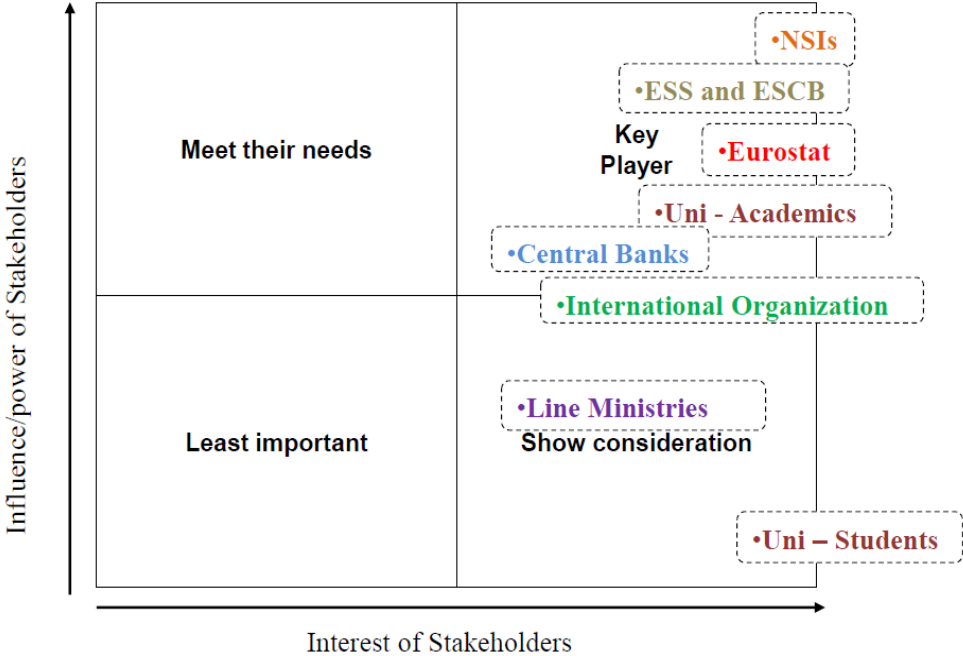
- NSI/universities: create or reinforce links between NSI and Universities through employment, internships, data access for practice, scientific consultancy, research collaborations, and so on.
- Eurostat/NSIs/universities: adapt the curriculum (elective courses), promote certain questions and problems from their specific competences, create an EMOS community.
- Eurostat/NSIs/ESSC: coordinate management of the needs for initial technical training and lifelong learning.
- Students/universities: attract the best students, promotion of interests in official statistics and a European labelling.
- International organisations/Eurostat/ESSC: promotion of international standards, international programmes in statistical literacy.
- Central banks/NSI and line ministries/NSI (relationships vary by country): improve the mobility of statisticians between institutions.

Moreover, there could be interactions between similar stakeholders in different countries:

- NSIs: networks between NSIs through professional exchange, methodology, common scientific language.
- European universities: create a network, summer school for responsible of Masters, exchange of experiences, reflection on the research and innovation.
- European students: EMOS Network, Alumni EMOS Network.

Matrix analysis of EMOS/ Venn diagramm

Figure 2: Matrix analysis of EMOS / Venn diagram



#### **Annex 1.4 – Members of the EMOS Group of Experts (GExp)**

Pascal Ardilly, INSEE

Mojca Bavdaz, University of Ljubljana

Antonio Cosma, University of Luxembourg

Jacek Kowalewski, CSO Poland

Risto Lehtonen, University of Helsinki

Ralf Münnich, University of Trier

Walter Jan van Muiswinkel, CBS

Monica Pratesi, University of Pisa

Ceri Regan, ONS

Natalie Shlomo, University of Manchester

Roxane Silberman, CESSDA

Maria Pia Sorvillo, ISTAT

Alain Trognon, GENES-INSEE

Markus Zwick, Eurostat

## Annex 2 - Risk Analysis

|   |  |
|---|--|
| $S$ (Severity) x $P$ (Probability) = $M$ (Risk Magnitude) | $1$ (low) - $3$ (high) * $1$ (low) - $3$ (high) = $1$ (low) – $9$ (high) |
|---|--|

| Risk No. | Risk<br>If "risk" happens then...                                      | S | P | M | Mitigation: Proposals to eliminate / minimise the risk<br>(What you will do in any case to reduce/manage the risk)                             | Contingency: What you will do to respond (manage the impact) if the risk occurs<br>(What you already do when it happens) |
|----------|--|---|---|---|--|--|
| 1        | Low interest of universities to apply                                  | 3 | 1 | 3 | The risk is minimal; there are enough interested universities; targeted promotion of EMOS in the 2 <sup>nd</sup> International EMOS conference | Continue EMOS with the interested universities and NSIs in order to show the benefits of the EMOS Network                |
| 2        | Low interest of students to join the programme                         | 3 | 1 | 3 | The risk is minimal; there are interested students   | Joint activities by universities and NSIs to promote EMOS  |
| 3        | Low interest of NSIs to offer internships and support to Master theses | 2 | 2 | 4 | Make the benefits of EMOS visible.   | Support from the ESSC and ESAC would be helpful  |
| 4        | Stakeholder conflicts  | 2 | 1 | 2 | The involved stakeholders share interest in EMOS. Possible conflicts could arise on questions of resources.                                    | Support from the ESSC and ESAC would be helpful  |

$S$  (Severity) x  $P$ (Probability) =  $M$  (Risk Magnitude)